

**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. TYPE OF WORK <b>DRILL</b> <input checked="" type="checkbox"/> <b>DEEPEN</b> <input type="checkbox"/> <b>PLUG BACK</b> <input type="checkbox"/>		5. LEASE DESIGNATION AND SERIAL NO. <b>U-31266</b>
B. TYPE OF WELL OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> WELL <input type="checkbox"/> OTHER <input type="checkbox"/> SINGLE ZONE <input type="checkbox"/> MULTIPLE ZONE <input checked="" type="checkbox"/>		6. IF INDIAN, ALLOTTEE OR TRIBE NAME <b>na</b>
2. NAME OF OPERATOR <b>Thurston Energy Operating Company</b>		7. UNIT AGREEMENT NAME <b>na</b>
3. ADDRESS OF OPERATORS <b>PO Box 240 Vernal, UT 84078</b>		8. FARM OR LEASE NAME <b>na</b>
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirement) at surface <b>2038' FNL &amp; 751' FEL SENE 40.623009</b> At proposed prod. Zone <b>same as above 44316014 109.230508</b>		9. WELL NO. <b>Thurston 8-20-9-24</b>
14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE <b>43 miles south of Vernal, UT</b>		10. FIELD OR LEASE NAME <b>Undesignated</b>
15. DISTANCE FROM PROPOSED LOC. TO NEAREST PROP. OR LEASE LINE, FT. (Also to nearest drig. Unit line, if any) <b>751'</b>		11. Sec., T., R., M., OR BLK AND SURVEY OR AREA <b>Sec. 20, T9S, R24E</b>
16. DISTANCE FROM PROPOSED LOCATION * TO NEAREST WELL, DRILLING COMPLETED, OR APPLIED FOR, ON THIS LEASE, FT. <b>2,500'</b>	17. NO. OF ACRES IN LEASE <b>1,594</b>	12. COUNTY OR PARISH <b>Uintah</b>
18. PROPOSED DEPTH <b>8,000</b>	19. NO. OF ACRES ASSIGNED TO THIS WELL <b>40</b>	13. STATE <b>Utah</b>
20. ROTARY OR CABLE TOOLS <b>Rotary</b>		21. APPROX. DATE WORK WILL START <b>4/30/06</b>
21. ELEVATION (SHOW WHETHER DF. RT, GR, etc.) <b>5288' GR</b>		

**PROPOSED CASING AND CEMENT PROGRAM**

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
<b>11"</b>	<b>9 5/8"</b>	<b>36#</b>	<b>2000'</b>	<b>180 sks</b>
<b>7 7/8"</b>	<b>5 1/2"</b>	<b>17#</b>	<b>T.D.</b>	<b>808 sks</b>

**The operator requests permission to drill the subject well. Please find the attached 10 point plan and 13 point plan.**

**William A Ryan  
290 S 800 E  
Vernal, UT 84078  
435-789-0968**

**CONFIDENTIAL**

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposed in to deepen or plug back, give data on proposed productive zone and proposed new productive zone. If proposal is to drill or deepen directional, give pertinent data on subsurface location and measure and true vertical depths. Give blowout preventer program, if any.

24

SIGNATURE <b>William A. Ryan</b>	TITLE <b>Agent</b>	DATE
(This space for Federal or State Office use)		

PERMIT NO. <b>43-047877-09</b>	APPROVAL DATE <b>BRADLEY G. HILL</b>
APPROVED BY <b>[Signature]</b>	TITLE <b>ENVIRONMENTAL SCIENTIST III</b>
CONDITIONS OF APPROVAL, IF ANY:	DATE <b>02-09-06</b>

**\*See Instructions on Reverse Side**

Title 18 U. S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**Federal Approval of this  
Action is Necessary**

**RECEIVED  
FEB 06 2006**

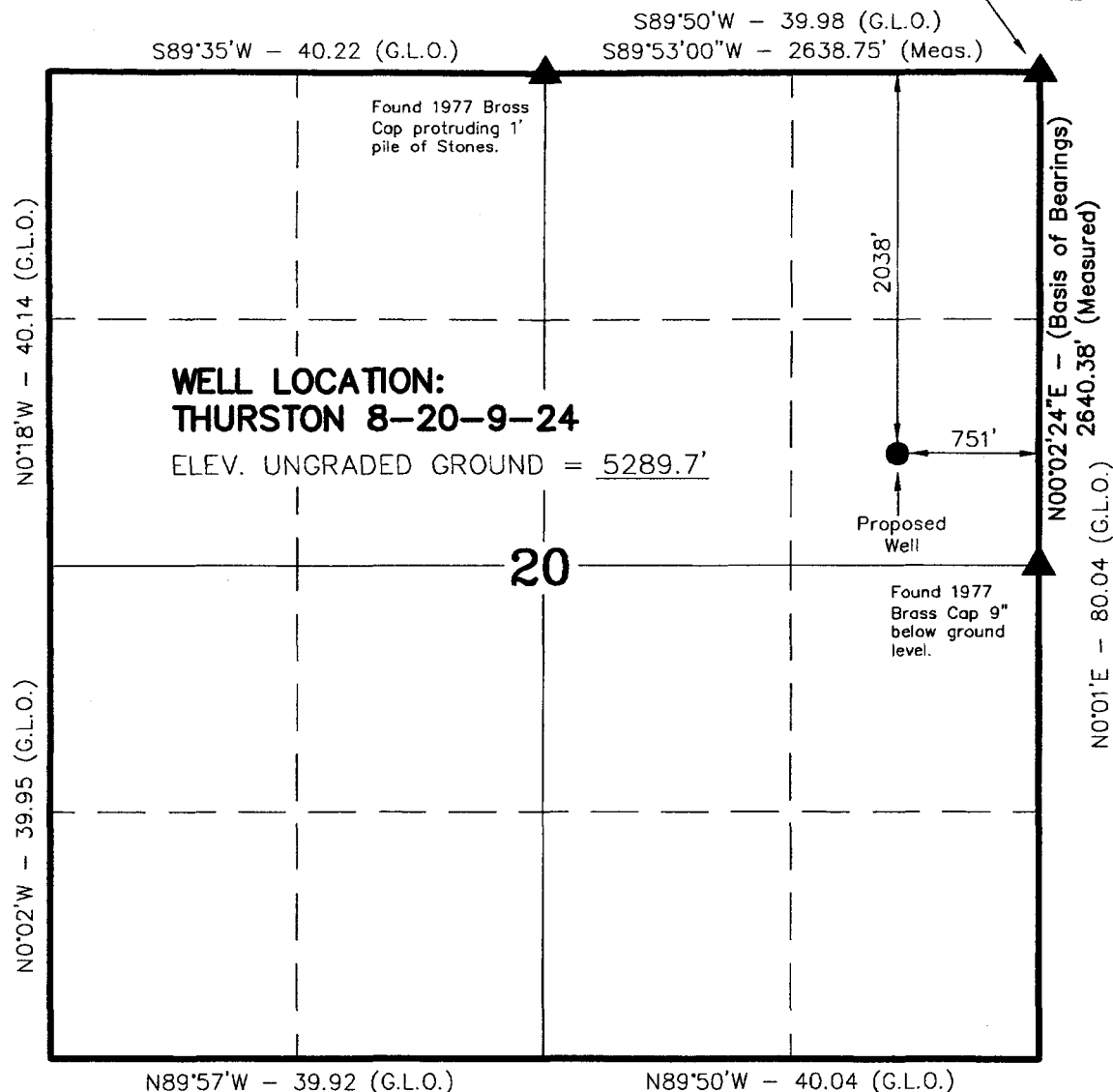
**DIV. OF OIL, GAS & MINING**

**T9S, R24E, S.L.B.&M.**

Found 1977 Brass  
Cap 6" above  
ground. Pile of  
Stones

**THURSTON ENERGY OPERATING COMPANY**

WELL LOCATION, THURSTON 8-20-9-24,  
LOCATED AS SHOWN IN THE SE 1/4 NE 1/4  
OF SECTION 20, T9S, R24E, S.L.B.&M. UTAH  
COUNTY, UTAH.

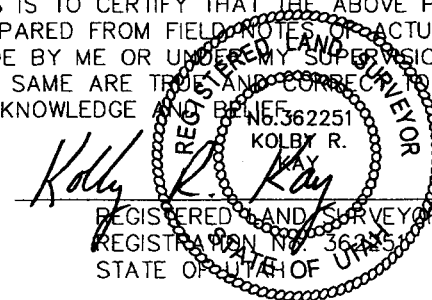


**NOTES:**

1. Well footages are measured at right angles to the Section Lines.
2. Bearings are based on Global Positioning Satellite observations.



THIS IS TO CERTIFY THAT THE ABOVE PLAT WAS  
PREPARED FROM FIELD NOTES OF ACTUAL SURVEYS  
MADE BY ME OR UNDER MY SUPERVISION AND THAT  
THE SAME ARE TRUE AND CORRECT TO THE BEST OF  
MY KNOWLEDGE AND BELIEF.



▲ = SECTION CORNERS LOCATED  
BASIS OF ELEVATION IS BENCH MARK 46 EAM  
LOCATED IN THE SW 1/4 OF SECTION 23, T9S,  
R24E, S.L.B.&M. THE ELEVATION OF THIS BENCH  
MARK IS SHOWN ON THE BONANZA 7.5 MIN.  
QUADRANGLE AS BEING 5550'.

**THURSTON 8-20-9-24**  
**(Proposed Well Head)**  
**NAD 83 Autonomous**  
LATITUDE = 40° 01' 22.9"  
LONGITUDE = 109° 13' 52.2"

**TIMBERLINE LAND SURVEYING, INC.**  
38 WEST 100 NORTH. - VERNAL, UTAH 84078  
(435) 789-1365

DATE SURVEYED: 10-18-05	SURVEYED BY: B.J.S.	<b>SHEET 2 OF 10</b>
DATE DRAWN: 10-29-05	DRAWN BY: J.R.S.	
SCALE: 1" = 1000'	Date Last Revised:	

## **SELF-CERTIFICATION STATEMENT**

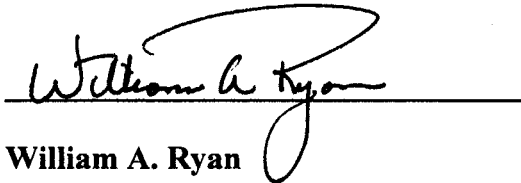
**The following self-certification statement is provided per Federal requirements dated June 15, 1988.**

**Please be advised that The Thurston Energy Operating Company are considered to be the operator of the following well.**

**Thurston 8-20-9-24  
Section 20, T.9S, R. 24 E.  
SE ¼, NE ¼,  
Lease U-31266  
Uintah County, Utah**

**The Thurston Energy Operating Company is responsible under the terms and conditions of the lease for the operations conducted upon the lease lands.**

**Bond UTB-000181 provides state-wide bond coverage on all Federal lands.**

A handwritten signature in black ink, reading "William A. Ryan", is written over a horizontal line.

**William A. Ryan  
Agent  
Rocky Mountain Consulting  
290 S. 800 E.  
Vernal UT 84078  
435-789-0968 Office  
435-828-0968 Cell  
435-789-0970 Fax  
rmcwar@hotmail.com**

## **Ten Point Plan**

### **Thurston Energy Operating Company**

**Thurston 8-20-9-24**

**Surface Location SE ¼ NE ¼, Section 20, T. 9S., R. 24E.**

**1. Surface Formation**

Green River

**2. Estimated Formation Tops and Datum:**

<u>Formation</u>	<u>Depth</u>	<u>Datum</u>
Green River	Surface	+5,288' G.L.
Wasatch	4,330	+958'
Mesaverda	6,010	-722'
Sago	8,050	-2,762'
TD	8,000	-2,712'

A 11" hole will be drilled to 2,000' +/- . The hole depth will depend on the depth that the Birds Nest Zone is encountered. The hole will be drilled 400' beyond the top of the Birds Nest.

**3. Producing Formation Depth:**

Formation objective includes the Green River, Wasatch, Mesaverde and its sub-members.

**Off Set Well information:**

**Permitted/Drilled:**

Thurston #13-20-9-24

**Abandon Wells:**

PTS Beehive #11-20

**Shut in Well:**

Dirty Devil Fed. #23-20

Dirty Devil Unit #11-29

**Producing Wells:**

Devils Playground #23-17

#### 4. Proposed Casing:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Weight/FT</u>	<u>Grade</u>	<u>Coupling &amp; Tread</u>	<u>Casing Depth</u>	<u>New/Used</u>
11"	9 5/8"	36#	J-55	STC	2000	NEW
7 7/8"	5 1/2"	17#	N-80	LTC	T.D.	NEW

#### Cement Program:

**Cement volume = Gauge hole + 25%**

**The Surface Casing will be cemented from 2000' to the Surface as follows:**

<u>Casing Size</u>	<u>Casing Depth</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Top Job:					
14"	As required	Class "G"	35 sks. +/-	1.18ft <sup>3</sup> /sk	15.6 ppg
Lead:					
9 5/8	surface-1400'	Premium "5"	53 sks. +/-	3.82ft <sup>3</sup> /sk	11.0 ppg
Tail:					
9 5/8	1400'-2000'	Premium "5"	92 sks. +/-	1.18ft <sup>3</sup> /sk	15.6 ppg

NOTE:

Cement top for tail = Trona + 200'

**Production casing will be cemented to 200' inside surface casing or higher as follows:**

<u>Casing Size</u>	<u>Casing Depth</u>	<u>Cement Type</u>	<u>Cement Amounts</u>	<u>Cement Yield</u>	<u>Cement Weight</u>
Lead:					
5 1/2	1800'-4130'	Premium "5"	436 sks +/-	3.82ft <sup>3</sup> /sk	11.0 ppg
Tail:					
5 1/2	4130'-TD	Premium "5"	372 sks +/-	1.18ft <sup>3</sup> /sk	15.6 ppg

NOTE:

Cement top for tail = Wasatch + 200'

## 5. BOP and Pressure Containment Data:

The anticipated bottom hole pressure will be less than 3000 psi.

A 3000-psi WP BOP system as described in the BOP and Pressure Containment Data (attached) will be installed and maintained from the 9 5/8" surface casing. The BOP system including the casing will be pressure tested to minimum standards set forth in "On Shore Order #2". The BOP will be mechanically checked daily during the drilling operation.

## 6. Mud Program:

<u>Interval</u>	<u>Mud weight lbs./gal.</u>	<u>Viscosity Sec./OT.</u>	<u>Fluid Loss Ml/30 Mins.</u>	<u>Mud Type</u>
40-2000	Air/Clear Water	NA	No Control	Air/Water
2000-T.D.	8.4-12.0	35-45	20-8	LSND

## 7. Auxiliary Equipment

Upper Kelly cock, full opening stabbing valve, 2 1/2" choke manifold and pit level indicator.

## 8. Testing, Coring, Sampling and Logging:

- a) Test: None are anticipated.
- b) Coring: There is the possibility of sidewall coring.
- c) Sampling: Every 10' from 2000' to T.D.
- d) Logging:

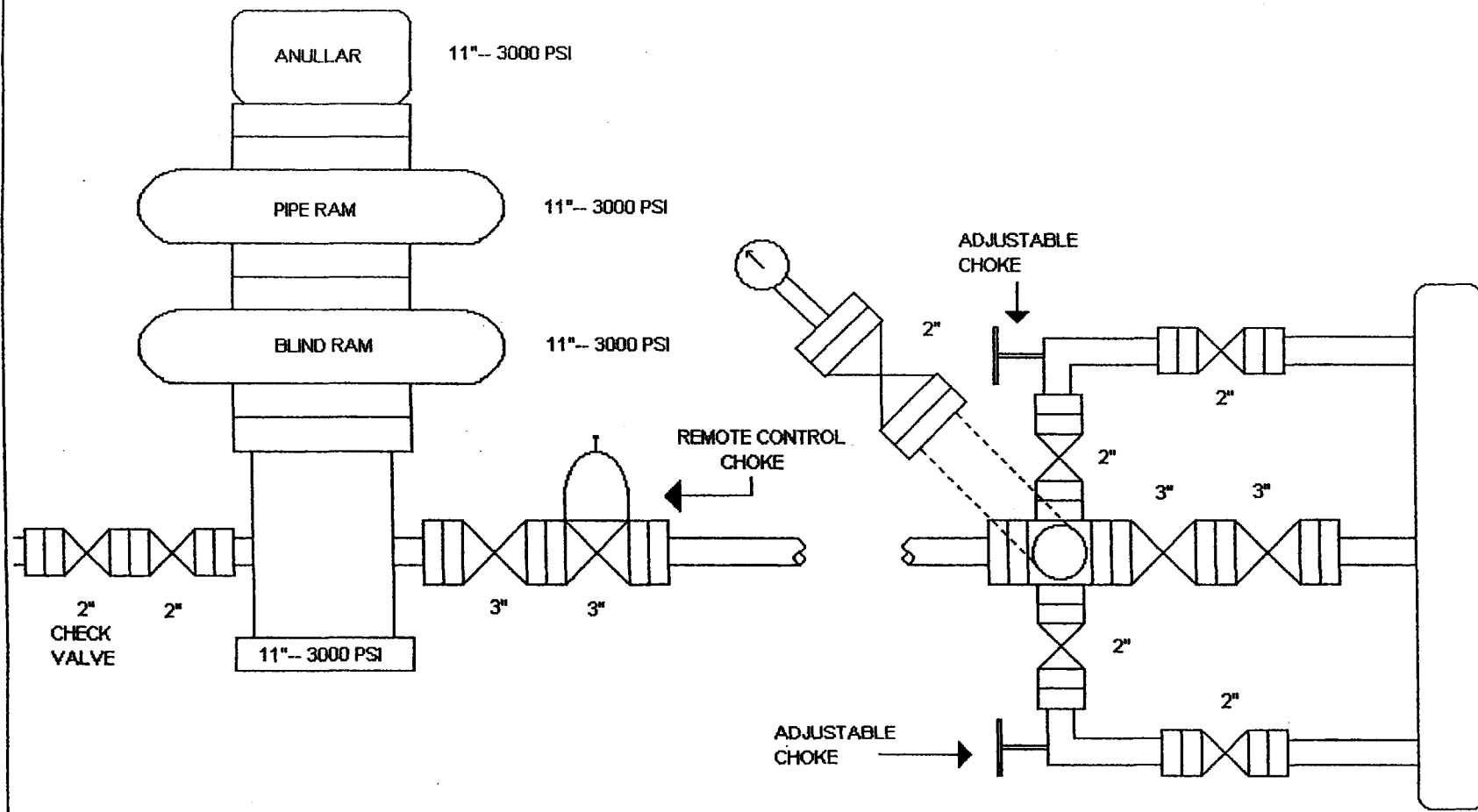
Type	Interval
DLL/SFL W/GR and SP	T.D. to Surf. Csg
FDC/CNL W/GR and CAL	T.D. to Surf. Csg

**9. Abnormalities (including sour gas):**

No abnormal pressures, temperatures or other hazards are anticipated. Oil and gas shows are anticipated in the Wasatch Formation. Other wells drilled in the area have not encountered over pressured zones or H<sub>2</sub>S.

**10. Drilling Schedule:**

The anticipated starting date is 4/30/06. Duration of operations is expected to be 30 days.





**THURSTON ENERGY OPERATING COMPANY**

**13 POINT SURFACE USE PLAN**

**FOR WELL**

**THURSTON 8-20-9-24**

**LOCATED IN SE ¼ NE ¼**

**SECTION 20, T.9S, R24E, S.L.B.&M.**

**UINTAH COUNTY, UTAH**

**LEASE NUMBER: U-31266**

**SURFACE OWNERSHIP: FEDERAL**

**1. Existing Roads:**

**Thurston Energy Operating CO  
Thurston #8-20-9-24  
Sec. 20, T9S, R24E**

**Starting in Vernal, Utah:**

**Proceed in an easterly, then southerly direction from Vernal, Utah along US Highway 40 approximately 3.3 miles to the junction of State Highway 45; exit right and proceed in a southerly direction along State Highway 45 approximately 36 miles to the junction of County B road 3410. Exit right and proceed in a westerly direction along County B road 3410 approximately 3.7 miles to the proposed access road. Follow road flags in a northeasterly direction approximately 160 feet to the proposed location.**

**Total distance from Vernal, Utah to the proposed well location is approximately 43.0 miles.**

**All existing roads to the proposed location are State of Utah, BLM maintained or County Class D roads. Please see the attached map for additional details.**

**2. Planned access road**

**The proposed access road will be approximately 160' of new construction on lease. The road will be graded once per year minimum and maintained.**

**A) Approximate length      160 ft**

<b>B) Right-of-Way width</b>	<b>30 ft</b>
<b>C) Running surface</b>	<b>18 ft</b>
<b>D) Surface material</b>	<b>Native soil</b>
<b>E) Maximum grade</b>	<b>5%</b>
<b>F) Fence crossing</b>	<b>None</b>
<b>G) Culvert</b>	<b>None</b>
<b>H) Turnouts</b>	<b>None</b>
<b>I) Major cuts and fills</b>	<b>None</b>
<b>J) Road Flagged</b>	<b>Yes</b>
<b>K) Access road surface ownership</b>	<b>Federal</b>
<b>L) All new construction on lease</b>	<b>Yes</b>
<b>M) Pipe line crossing</b>	<b>None</b>

**Please see the attached location plat for additional details.**

**An off lease Right-of-Way will not be required.**

**All surface disturbances for the road and location will be within the lease boundary.**

**3. Location of existing wells**

**The following wells are located within a one-mile radius of the location site.**

<b>A) Producing well</b>	
<b>Devils Playground #23-17</b>	
<b>B) Water well</b>	<b>None</b>
<b>C) Abandoned well</b>	
<b>PTS Beehive #11-20</b>	
<b>D) Temp. abandoned well</b>	<b>None</b>
<b>E) Disposal well</b>	<b>None</b>
<b>F) Drilling /Permitted well</b>	
<b>Thurston #13-20</b>	
<b>G) Shut in wells</b>	
<b>Dirty Devil Fed. #23-20</b>	
<b>Dirty Devil #11-29</b>	
<b>H) Injection well</b>	<b>None</b>
<b>I) Monitoring or observation well</b>	<b>None</b>

Please see the attached map for additional details.

4. Location of tank batteries, production facilities and production gathering service lines.

All production facilities are to be contained within the proposed location site. Please see the attached plat plan for a typical gas well separator installation and well site piping.

All permanent (on site for more than six months or longer) structures constructed or installed will be painted a **Carlsbad Canyon** color. Facilities required to comply with O.S.H.A. (Occupational Safety and Health Act) will be excluded. The required paint color is **Carlsbad Canyon**.

All tanks will be surrounded by a dike of sufficient capacity to contain the storage capacity of the largest tank in the battery. The integrity of the dike will be maintained.

The operator will adhere to all site security guidelines and regulation identified in 43 cfr 3126.7.

All off lease storage, off lease measurement, commingling on lease or off lease, of production, will have prior written approval from the authorized officer.

If the well is capable of economic production a surface gas line will be required.

**Approximately 3,615' of 3" steel gas gathering surface pipeline would be constructed on Federal Lands. (Due to bedrock sandstone, shallow soils and a tie-in with a surface gathering system the line will not be buried.) The pipeline will tie into the existing pipeline in Sec 20, T9S, R24E. The pipeline will be strung and boomed to the northwest of the location and parallel to the access road.**

**An off lease Right-of-Way will not be required.**

Please see the attached location diagrams for pipeline location. There will be no additional surface disturbances required for the installation of a gathering line.

The gas meter run will be located within 500' of the wellhead. The gas line will be buried or anchored down from the wellhead to the meter. Meter runs will be housed and/or fenced.

The gas meter will be calibrated and the tank strapped in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three months on new meter installations and at least quarterly thereafter. The authorized officer will be provided with a date and time for the initial meter calibration and all future meter-proving schedules. A copy of the meter calibration report will be submitted to the BLM's Vernal District office and State of Utah, Division of Oil, Gas, and Mining. All measurement facilities will conform to API (American

Petroleum Institute) and AGA (American Gas Association) standards for gas and liquid hydrocarbon measurement.

5. Location and type of water supply

**Water for drilling and cementing will come from The White River at the Bonanza Bridge, Permit # - T75376.**

6. Source of construction materials

All construction material for this location site and access road shall be borrow material accumulated during construction of the location site and access road. Additional road gravel or pit lining material will be obtained from private resources.

7. Methods for handling waste disposal

A) Pit construction and liners:

The reserve pit will be approximately 12 ft. deep and most of the depth shall be below the surface of the existing ground. Please see the attached plat for details.

The reserve pit will be lined.

The reserve pit will be used to store water for drilling. A semi-closed system will be used to drill the well. All fresh water for drilling will come from a frac tank placed on location and from the rig tank. The pit will be used to hold non-flammable materials

such as cuttings, salt, drilling fluids, chemicals, produced fluids, etc.

B) Produced fluids:

Produced water will be confined to the reserve pit or, if deemed necessary, a storage tank will be used for a period not to exceed 90 days after initial production. During the 90-day period an application for approval for permanent disposal method and location will be submitted to the authorized officer.

C) Garbage:

A trash cage fabricated from expanded metal will be used to hold trash on location and will be removed to an authorized landfill location.

D) Sewage:

A portable chemical toilet will be supplied for human waste.

E) Site clean-up:

After the rig is moved off the location the well site area will be cleaned and all refuse removed.

8. Ancillary facilities

There are no ancillary facilities planned at this time and none are foreseen for the future.

9. Well-site layout

Location dimensions are as follows:

- A) Pad length 345 ft
- B) Pad width 260 ft
- C) Pit depth 12 ft
- D) Pit length 150 ft
- E) Pit width 75 ft
- F) Max cut 19.4 ft
- G) Max fill 10.7 ft
- H) Total cut yds. 7,820 cu yds
- I) Pit location South end
- J) Top soil location  
North & West ends
- K) Access road location  
West end
- L) Flare Pit corner C

Please see the attached location diagram for additional details.

All pits will be fenced according to the following minimum standards:

- A) Thirty nine inch net wire shall be used with at least one strand of wire on top of the net wire. Barbed wire is not necessary if pipe or some type of reinforcement rod is attached to the top of the entire fence.
- B) The net wire shall be no more than 2 inches above the ground. The barbed wire shall be 3 inches above the net wire. Total height of the fence shall be at least 42 inches.
- C) Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.

- D) Standard steel, wood or pipe posts shall be used between the corner braces. Maximum distance between any two posts shall be no greater than 16 ft.

- E) All wire shall be stretched by using a stretching device before it is attached to the corner posts.

10. Plans for restoration of the surface

Prior to construction of the location, the top 6 inches of soil material will be stripped off the location and the pit area. The topsoil removed and piled will amount to approximately 1,500 cubic yards of material. Topsoil will be stockpiled in one distinct pile. Placement of the topsoil is noted on the attached location plat. The topsoil pile from the location will be seeded as soon as the soil is stock piled with the seed mix listed. **The topsoil will be used in the interim reclamation.** When all drilling and completion activities have been completed and the pit back-filled the topsoil from the pit area will be spread on the pit area. The pit area will be seeded when the soil has been spread. **The unused portion of the location (the area outside the dead men) will be reclaimed and re-contoured.**

The dirt contractor will be provided with an approved copy of the surface use plan prior to construction activities.

Changes to the drainage during the construction activities shall be restored to its original line of flow

or as near as possible when the pit is back-filled

All disturbed areas will be re-contoured to the approximate natural contours. Prior to back filling the pit the fences around the reserve pit will be removed.

The reserve pit will be reclaimed within 90 days of well completion. If the reserve pit has not dried sufficiently to allow back filling, an extension on the time requirement for back filling the pit will be requested. Once reclamation activities have begun, they shall be completed within 30 days.

After the reserve pit has been reclaimed, no depressions in the soil covering the reserve pit will be allowed. The objective is to keep seasonal rainfall and run off from seeping into the soil used to cover the reserve pit. Diversion ditches and water bars will be used to divert the run off as needed.

When restoration activities have been completed, the location site and new access road cuts and shoulders shall be reseeded. Prior to reseeding, all disturbed areas will be scarified. And left with a rough surface.

**A) Seeding dates:**

Seed will be spread when topsoil is stock piled and when reclamation work is performed.

The seed mix and quantity list will be used whether the seed is broadcast or drilled.

**B) Interim Seed Mix:**

**6#/acre Needle & Thread Grass**

**6#/acre Crested Wheat Grass**

**11. Surface ownership:**

<b>Access road</b>	<b>Federal</b>
<b>Location</b>	<b>Federal</b>
<b>Pipe line</b>	<b>Federal</b>

**12. Other information:**

**A) Vegetation**

The vegetation coverage is Slight. The majority of the existing vegetation consists of Sagebrush. Rabbit brush, Bitter Brush, and Indian Rice grass are also found on the location.

**B) Dwellings:**

There are no dwelling or other facilities within a one-mile radius of the location.

**C) Archeology:**

The location has been surveyed. A copy of that survey will be forwarded to your office.

If, during operations, any archaeological or historical sites, or any objects of antiquity (subject to the antiquities act of June 8, 1906) are discovered, all operations which would affect such sites will be suspended and the discovery reported promptly to the surface management agency.

D) Water:

**The nearest water is the White River located approximately 5 miles to the South.**

E) Chemicals:

No pesticides, herbicides or other possible hazardous chemicals will be used without prior application.

F) Notification:

- a) Location Construction  
At least forty eight (48) hours prior to construction of location and access roads.
- b) Location completion  
Prior to moving on the drilling rig.
- c) Spud notice  
At least twenty-four (24) hours prior to spudding the well.
- d) Casing string and cementing  
At least twenty-four (24) hours prior to running casing and cementing all casing strings.
- e) BOP and related equipment tests  
At least twenty-four (24) hours prior to initial pressure tests.
- f) First production notice  
Within five (5) business days after the new well begins, or production resumes after well has

been off production for more than 90 days.

G) Flare pit:

The flare pit will be located in **corner C** of the reserve pit outside the pit fences and 100 feet from the bore hole on the east side of the location. All fluids will be removed from the pit within 48 hours of occurrence.

13. Lessees or Operator's representative and certification

A) Representative

William A. Ryan  
Rocky Mountain Consulting  
Vernal, UT 84078

Office 435-789-0968  
Fax 435-789-0970  
Cellular 435-828-0968

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations, onshore oil and gas orders, and any applicable notices to lessees. The operator is fully responsible for the actions of his subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

This drilling permit will be valid for a period of one year from the date of approval. After permit termination, a new application will be filed for

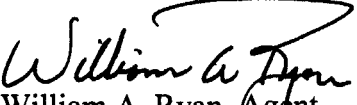
approval for any future  
operations.

01/05/06

**B) Certification:**

I hereby certify that I, or persons under my direct supervision, have inspected the proposed drill-site and access route, that I am familiar with the conditions which presently exist, that the statements made in this plan are, to the best of my knowledge and belief, true and correct, and that the work associated with the operation proposed herein will be performed by Thurston Energy Operating Company and its contractors and subcontractors in conformity with this plan and terms and conditions with this plan and the terms and conditions under which it is approved.

Date 1/18/06

  
William A. Ryan, Agent  
Rocky Mountain Consulting

**Onsite Dates:**



### **Statement of use of Hazardous Materials**

No chemical(s) from the EPA's consolidated list of Chemicals Subject to Reporting under Title III of the Superfund Amendments and Reauthorization, Act (SARA) of 1986 will be used, produced, transported, stored, disposed, or associated with the proposed action. No extremely hazardous substances, as defined in 40 cfr 355, will be used, produced, stored, transported, disposed, or associated with the proposed action.

If you require additional information please contact:

William A Ryan  
Agent for Thurston Energy Operating CO  
290 S 800 E  
Vernal, UT 84078

435-789-0968 Office  
435-828-0968 Cell

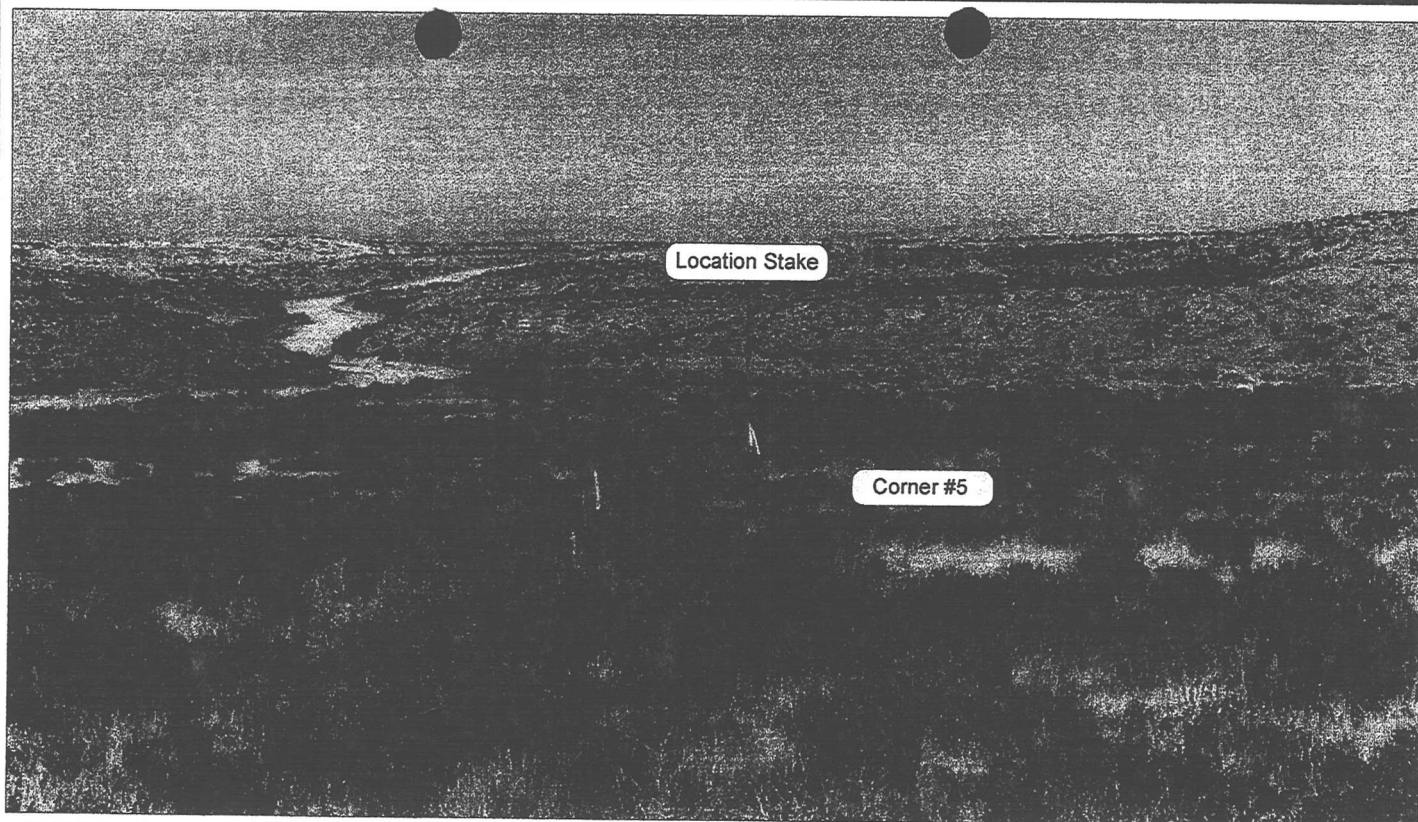


PHOTO VIEW: FROM CORNER #5 TO LOCATION STAKE

CAMERA ANGLE: NORTHERLY

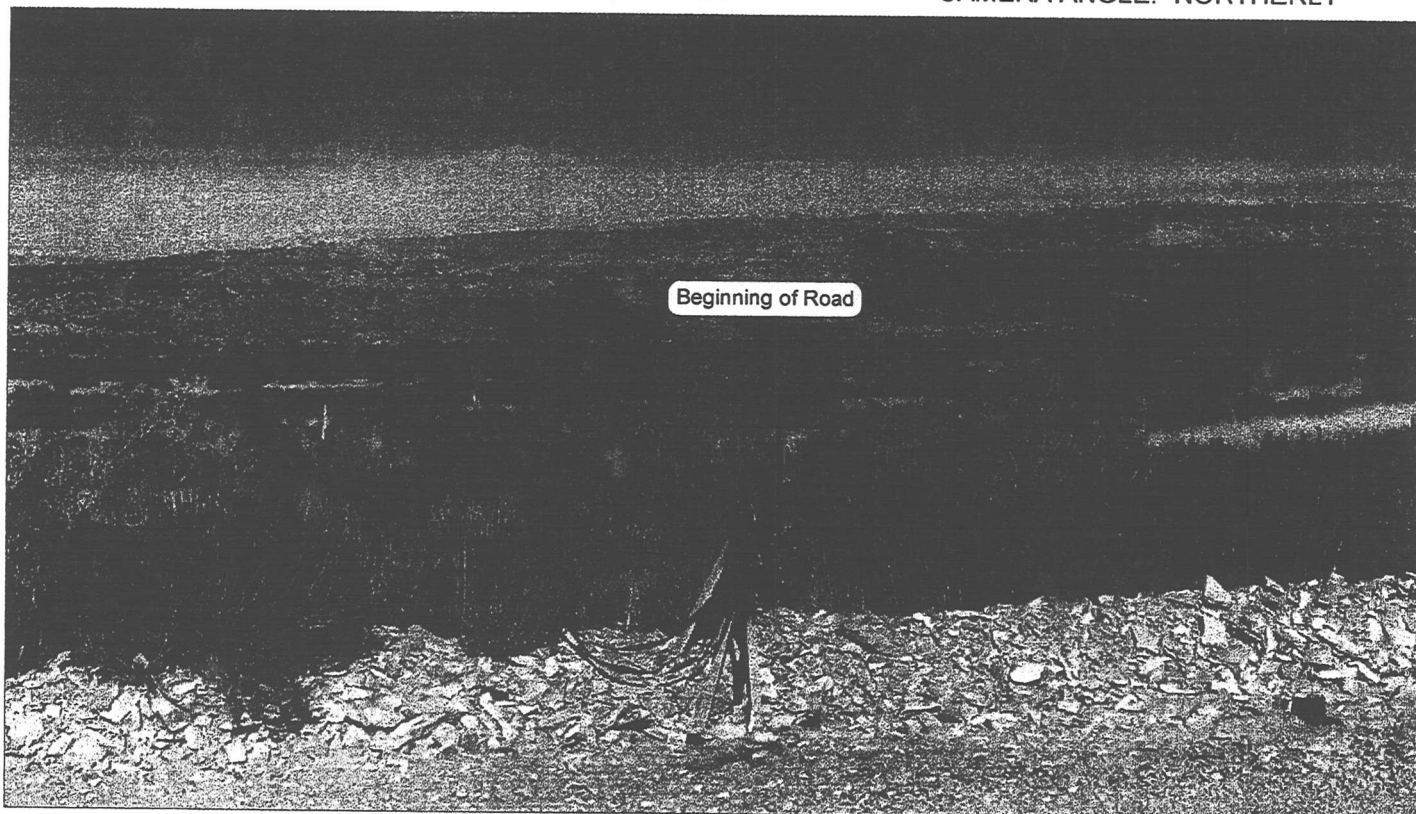


PHOTO VIEW: FROM BEGINNING OF PROPOSED ROAD

CAMERA ANGLE: NORTHEASTERLY

**THURSTON ENERGY OPERATING COMPANY**

**Thurston 8-20-9-24**  
**SECTION 20, T9S, R24E, S.L.B.&M.**  
**2038' FNL & 751' FEL**

**LOCATION PHOTOS**

TAKEN BY: K.R.K.

DRAWN BY: B.J.Z.

DATE TAKEN: 10-18-05

DATE DRAWN: 10-31-05

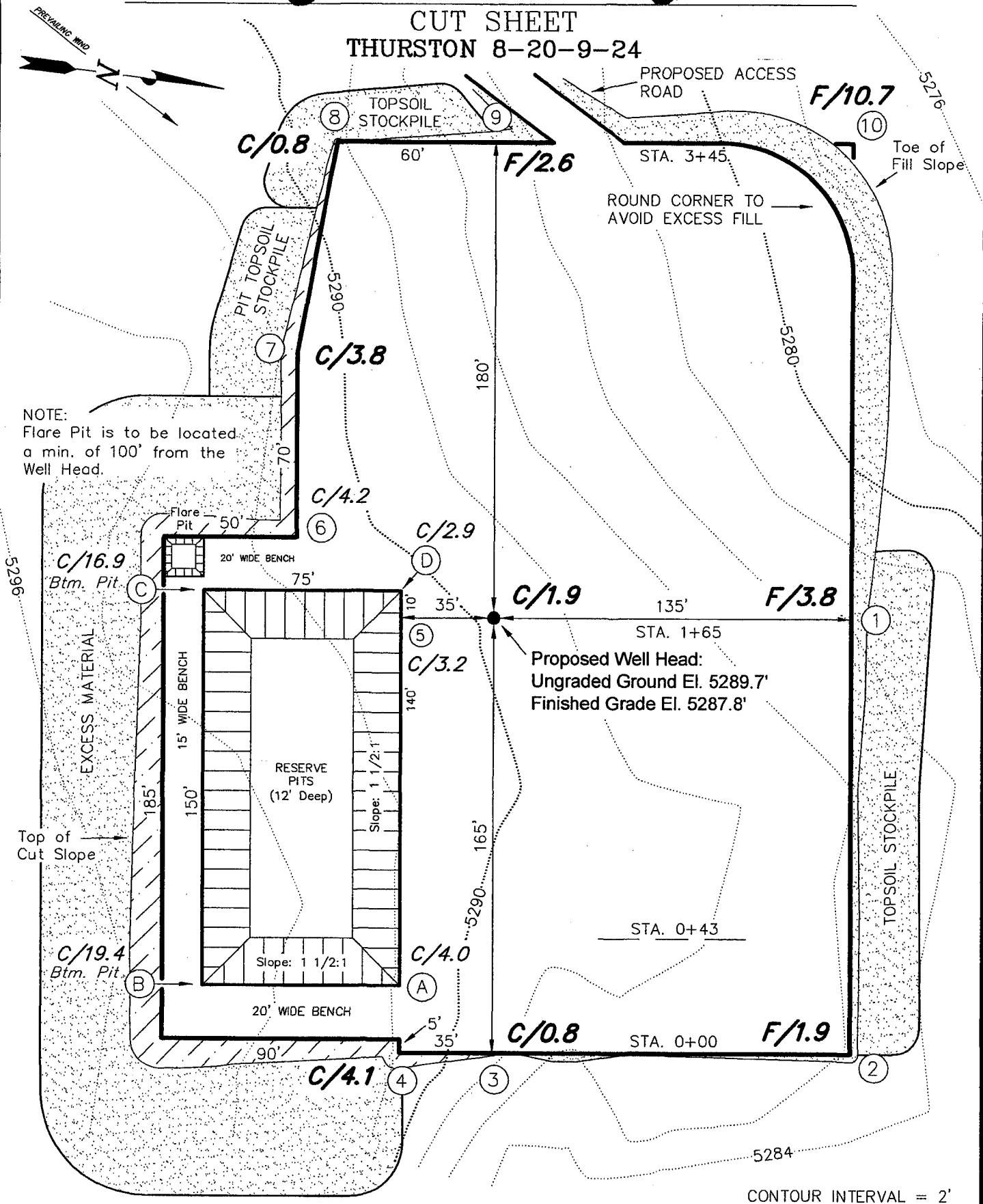
REVISED: 11-1-05 B.J.Z.

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

**SHEET**  
**1**  
**OF 10**

# THURSTON ENERGY OPERATING COMPANY

CUT SHEET  
THURSTON 8-20-9-24

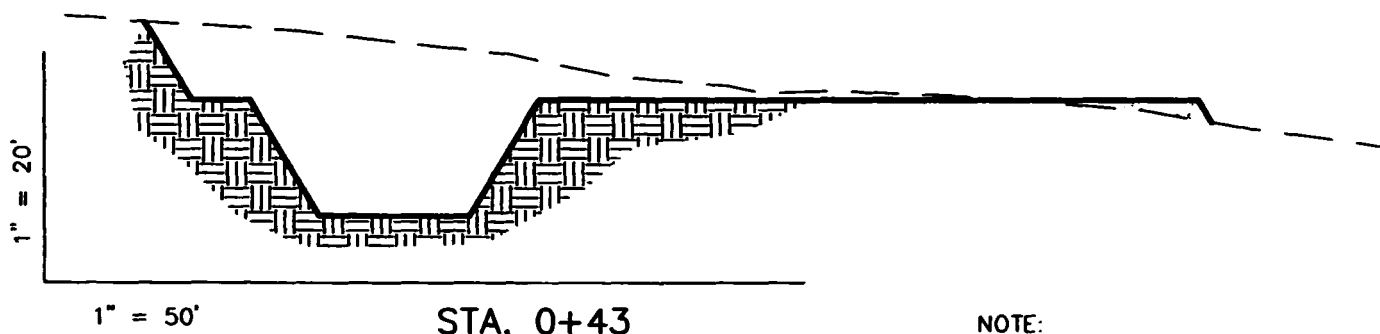
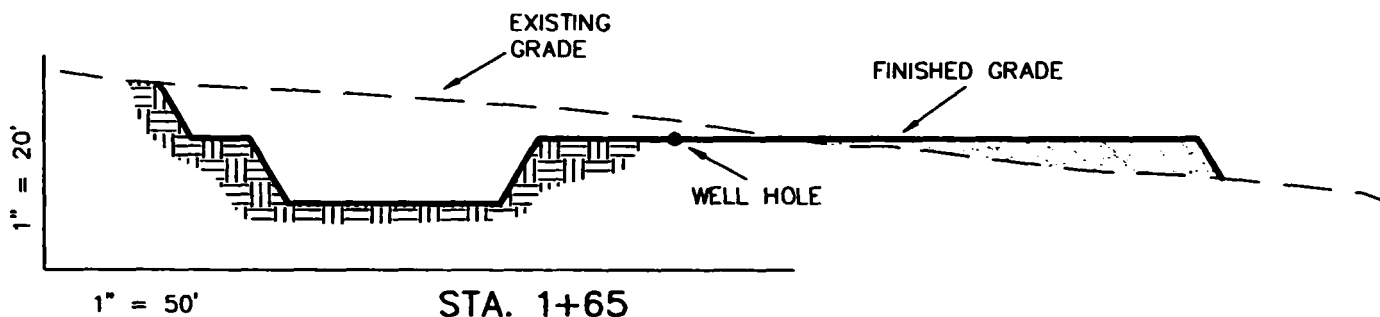
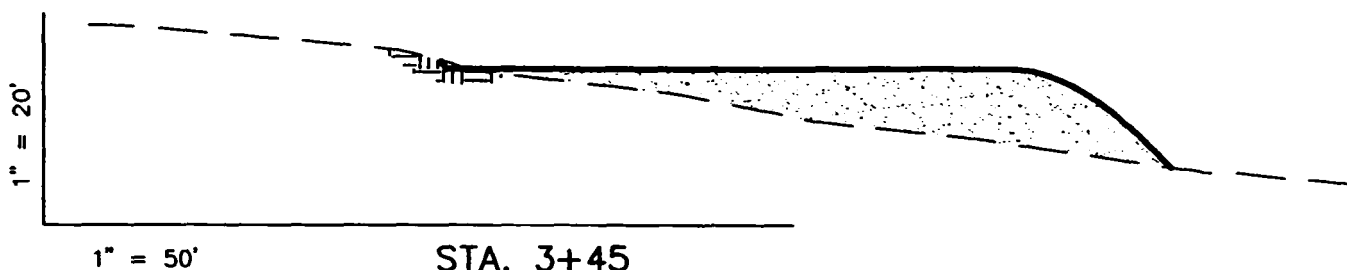


CONTOUR INTERVAL = 2'

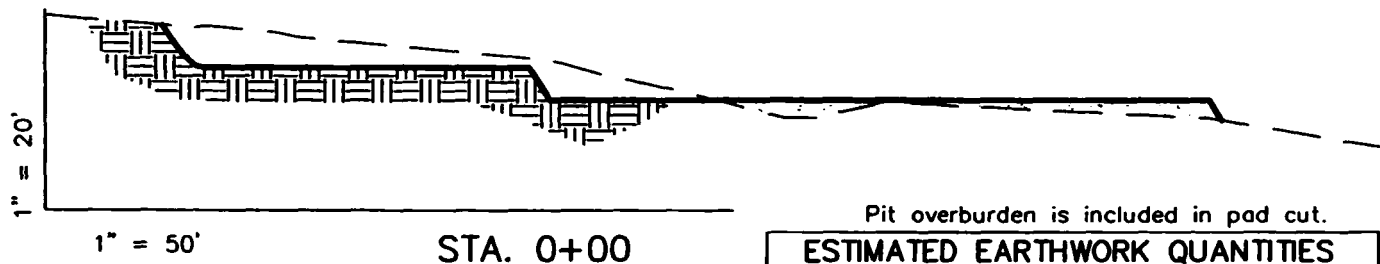
Section 20, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SE NE	Footage Location: 2038' FNL & 751' FEL
Date Surveyed: 10-18-05	Date Drawn: 10-29-05	Date Last Revision:	
Surveyed By: B.J.S.	Drawn By: J.R.S.	Scale: 1" = 50'	
<b>Timberline</b> Land Surveying, Inc. 38 WEST 100 NORTH VERNAL, UTAH 84078			(435) 789-1365 <b>SHEET 3 OF 10</b>

# THURSTON ENERGY OPERATING COMPANY

## CROSS SECTIONS THURSTON 8-20-9-24



NOTE:  
UNLESS OTHERWISE NOTED  
ALL CUT/FILL SLOPES ARE  
AT 1.5:1



### REFERENCE POINTS

215' EASTERLY = 5284.0'  
265' EASTERLY = 5283.6'  
185' NORTHERLY = 5281.2'  
235' NORTHERLY = 5277.8'

Pit overburden is included in pad cut.

### ESTIMATED EARTHWORK QUANTITIES (No shrink or swell adjustments have been used) (Expressed in Cubic Yards)

ITEM	CUT	FILL	6" TOPSOIL	EXCESS
PAD	4,480	6,150	Topsoil is not included in Pad Cut	-1,670
PIT	3,340	0		3,340
TOTALS	7,820	6,150	1,500	1,670

Excess Material after Pit Rehabilitation = 0 Cu. Yds.

Section 20, T9S, R24E, S.L.B.&M.

Qtr/Qtr Location: SE NE

Footage Location: 2038' FNL & 751' FEL

Date Surveyed:  
10-18-05

Date Drawn:  
10-29-05

Date Last Revision:

Surveyed By: B.J.S.

Drawn By: J.R.S.

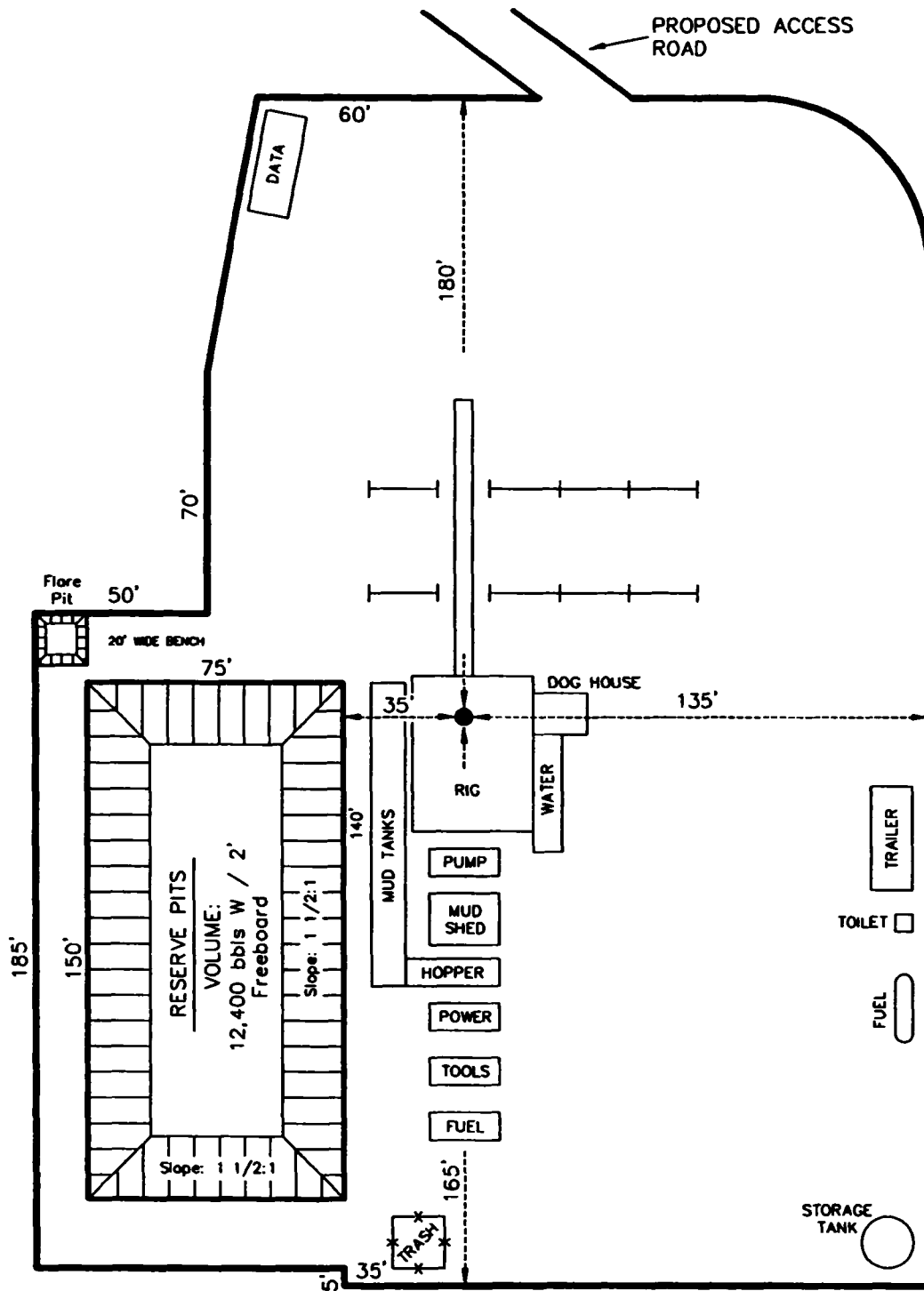
Scale: 1" = 50'

**Timberline** (435) 789-1365  
**Land Surveying, Inc.**  
38 WEST 100 NORTH VERNAL, UTAH 84078

**SHEET**  
**4**  
**OF 10**

# THURSTON ENERGY OPERATING COMPANY

## TYPICAL RIG LAYOUT THURSTON 8-20-9-24

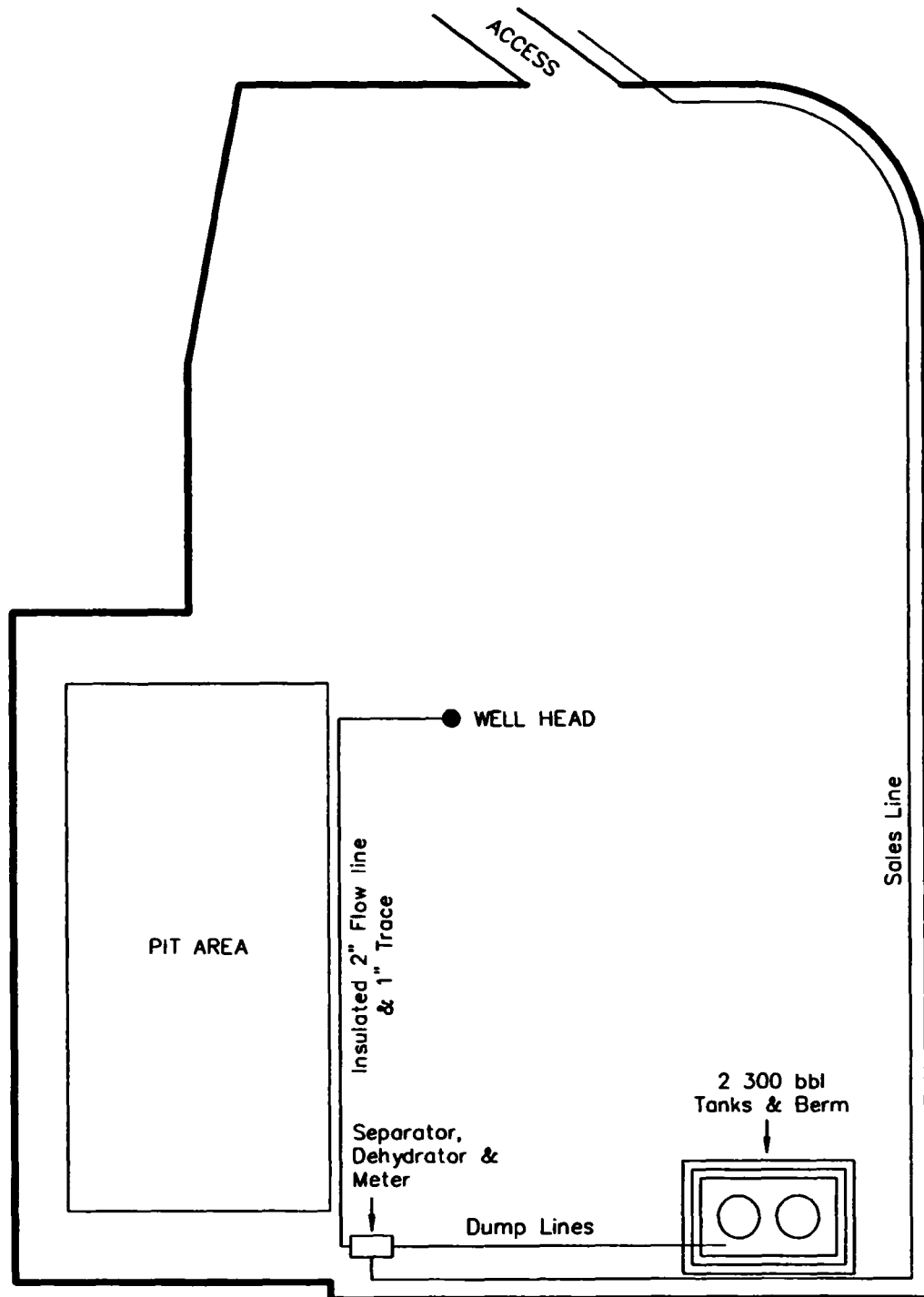


Section 20, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SE NE	Footage Location: 2038' FNL & 751' FEL
Date Surveyed: 10-18-05	Date Drawn: 10-29-05	Date Last Revision:	<b>Timberline</b> (435) 789-1365
Surveyed By: B.J.S.	Drawn By: J.R.S.	Scale: 1" = 50'	<b>Land Surveying, Inc.</b>
38 WEST 100 NORTH VERNAL, UTAH 84078			<b>SHEET 5 OF 10</b>

# THURSTON ENERGY OPERATING COMPANY

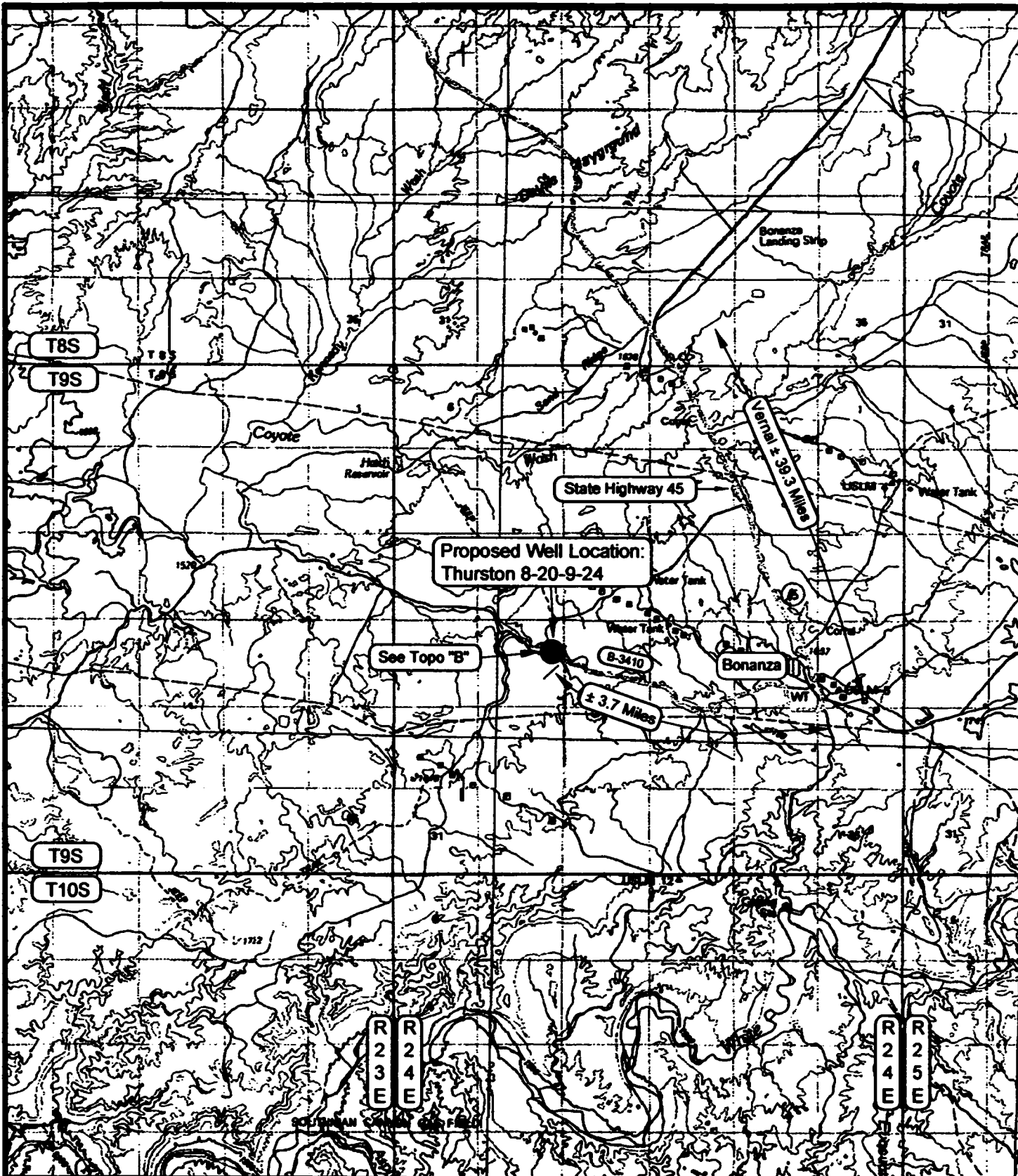
## TYPICAL PRODUCTION LAYOUT

THURSTON 8-20-9-24



Section 20, T9S, R24E, S.L.B.&M.		Qtr/Qtr Location: SE NE	Footage Location: 2038' FNL & 751' FEL
Date Surveyed: 10-18-05	Date Drawn: 10-29-05	Date Last Revision:	<b>Timberline</b> (435) 789-1365 <b>Land Surveying, Inc.</b> 38 WEST 100 NORTH VERNAL, UTAH 84078
Surveyed By: B.J.S.	Drawn By: J.R.S.	Scale: 1" = 50'	

SHEET  
6  
OF 10



# LEGEND

- = PROPOSED WELL LOCATION
- = EXISTING ROAD
- = EXISTING ROAD (TO BE IMPROVED)
- = PROPOSED ACCESS ROAD
- (B-5460) = COUNTY ROAD CLASS & NUMBER

## TOPOGRAPHIC MAP "A"

SCALE: 1:100,000

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-18-05

DATE DRAWN: 10-28-05

REVISED: 10-31-05 B.J.Z.

## THURSTON ENERGY OPERATING COMPANY

**Thurston 8-20-9-24**  
**SECTION 20, T9S, R24E, S.L.B.&M.**  
**2038' FNL & 751' FEL**

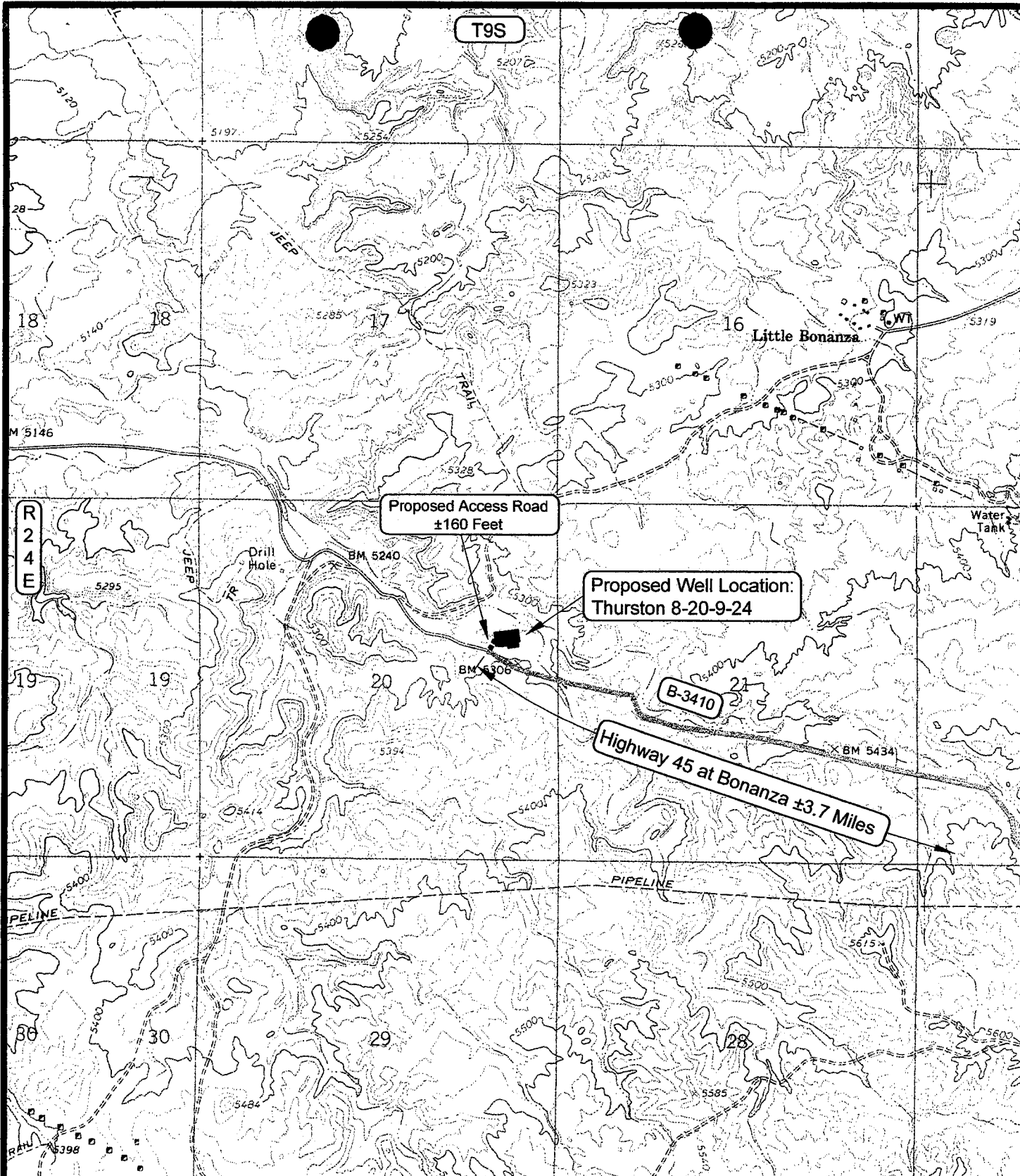
## Timberline Land Surveying, Inc.

38 West 100 North Vernal, Utah 84078  
 (435) 789-1385

SHEET

7

OF 10



#### LEGEND

- PROPOSED ACCESS ROAD  
 ■■■■■ = SUBJECT WELL  
 ■■■■■ = SHARED ACCESS  
 - - - - - = EXISTING ROAD  
 - - - - - = EXISTING ROAD (TO BE IMPROVED)  
 B-5460 = COUNTY ROAD CLASS & NUMBER  
 - - - - - = LEASE LINE AND / OR PROPERTY LINE

#### TOPOGRAPHIC MAP "B"

SCALE: 1" = 2000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-18-05

DATE DRAWN: 10-28-05

REVISED: 10-31-05 B.J.Z.

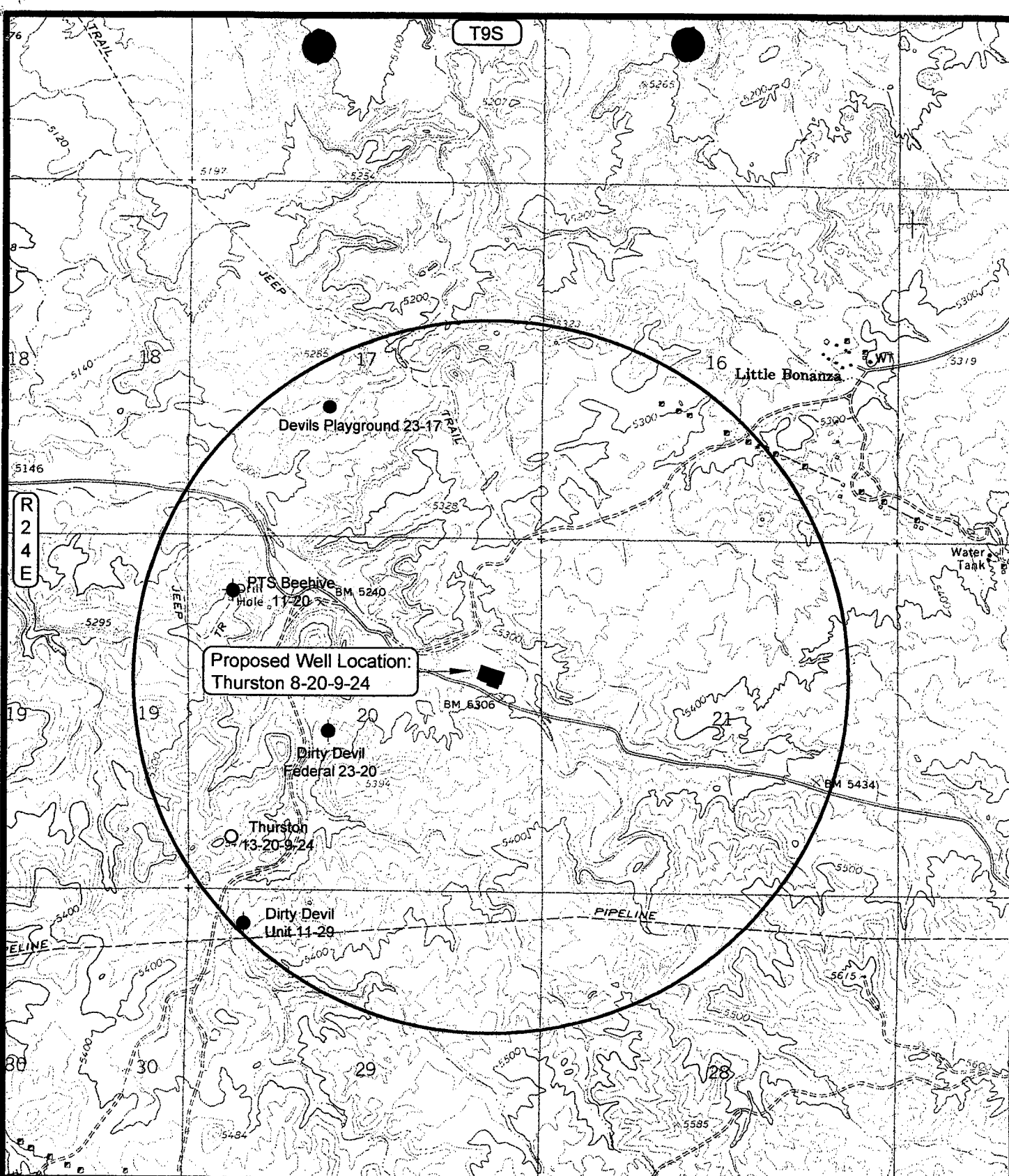
#### THURSTON ENERGY OPERATING COMPANY

**Thurston 8-20-9-24**  
**SECTION 20, T9S, R24E, S.L.B.&M.**  
**2038' FNL & 751' FEL**

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

SHEET  
**8**  
 OF 10





# LEGEND

- ⊗ = DISPOSAL WELL
- = PRODUCING WELL
- = SHUT IN WELL
- = PROPOSED WELL
- ⊗ = WATER WELL
- = ABANDONED WELL
- = TEMPORARILY ABANDONED WELL
- ⊗ = ABANDONED LOCATION

TOPOGRAPHIC MAP "C"

SCALE: 1" = 2000'

DRAWN BY: BJ.Z.

DATE SURVEYED: 10-18-05

DATE DRAWN: 10-31-05

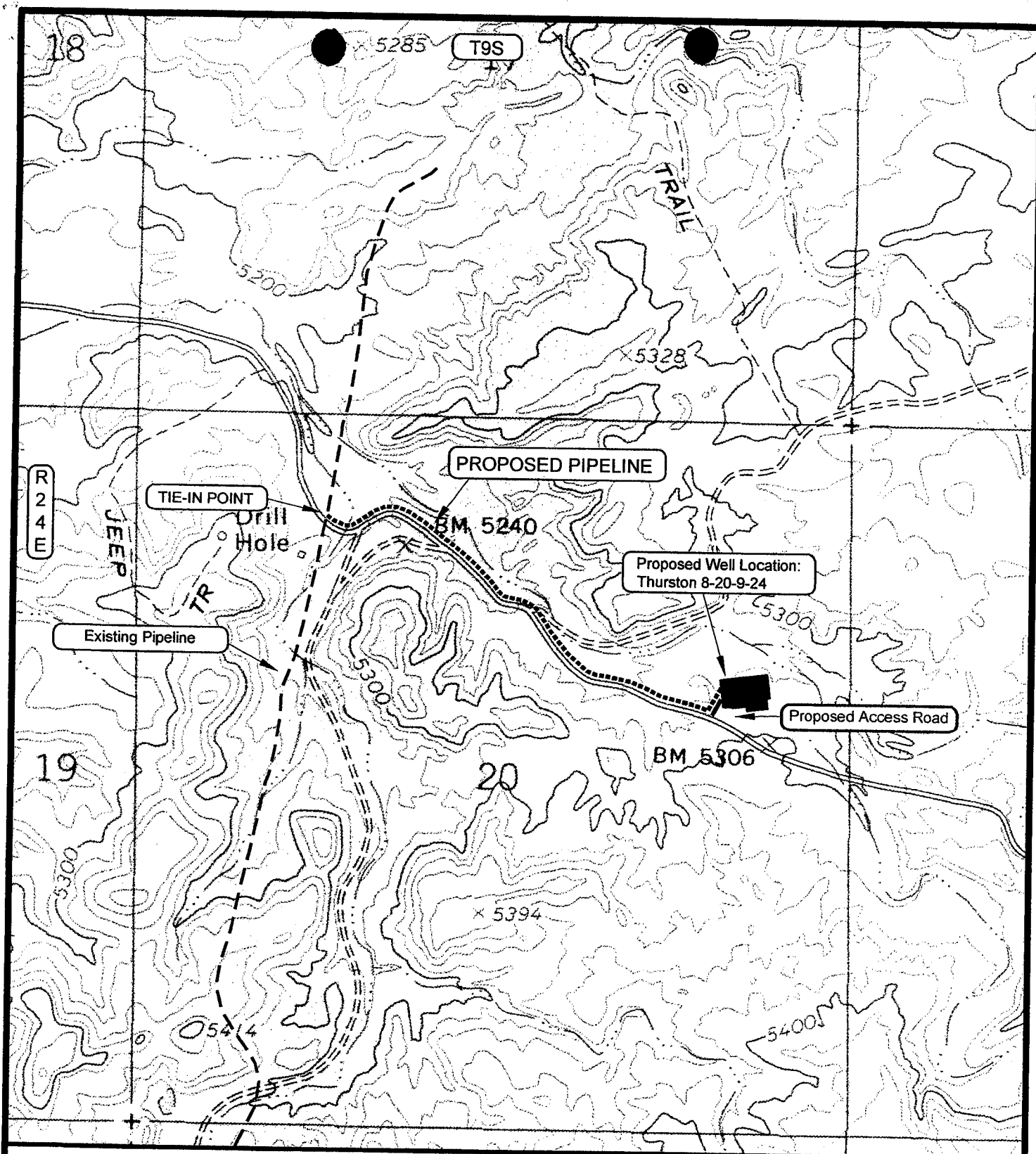
REVISED: 10-31-05 BJ.Z.

## THURSTON ENERGY OPERATING COMPANY

**Thurston 8-20-9-24**  
**SECTION 20, T9S, R24E, S.L.B.&M.**  
**2038' FNL & 751' FEL**

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

**SHEET**  
**9**  
**OF 10**



APPROXIMATE PIPELINE LENGTH = 3,615 Feet

#### LEGEND

- = EXISTING PIPELINE
- - - = PROPOSED PIPELINE
- = PROPOSED ACCESS ROAD
- - - = LEASE LINE AND / OR PROPERTY LINE

#### TOPOGRAPHIC MAP "D"

SCALE: 1" = 1000'

DRAWN BY: B.J.Z.

DATE SURVEYED: 10-18-05

DATE DRAWN: 10-31-05

REVISED: 10-31-05 B.J.Z.

#### THURSTON ENERGY OPERATING COMPANY

**Thurston 8-20-9-24**  
**SECTION 20, T9S, R24E, S.L.B.&M.**  
**2038' FNL & 751' FEL**

**Timberline Land Surveying, Inc.**  
 38 West 100 North Vernal, Utah 84078  
 (435) 789-1365

**SHEET**  
**10**  
**OF 10**

**WORKSHEET**  
**APPLICATION FOR PERMIT TO DRILL**

APD RECEIVED: 02/06/2007

API NO. ASSIGNED: 43-047-37709

WELL NAME: THURSTON 8-20-9-24

OPERATOR: THURSTON ENERGY ( N2790 )

CONTACT: BILL RYAN

PHONE NUMBER: 435-789-0968

**PROPOSED LOCATION:**

SENE 20 090S 240E

SURFACE: 2038 FNL 0751 FEL

BOTTOM: 2038 FNL 0751 FEL

COUNTY: UINTAH

LATITUDE: 40.02301 LONGITUDE: -109.2305

UTM SURF EASTINGS: 651001 NORTHINGS: 4431601

FIELD NAME: UNDESIGNATED ( 2 )

INSPECT LOCATN BY: / /

Tech Review	Initials	Date
Engineering		
Geology		
Surface		

LEASE TYPE: 1 - Federal

LEASE NUMBER: U-31266

SURFACE OWNER: 1 - Federal

PROPOSED FORMATION: MVRD

COALBED METHANE WELL? NO

**RECEIVED AND/OR REVIEWED:**

☒ Plat  
☒ Bond: Fed[1] Ind[] Sta[] Fee[]  
(No. UTB-000181 )  
☒ Potash (Y/N)  
☒ Oil Shale 190-5 (B) or 190-3 or 190-13  
☒ Water Permit  
(No. T75376 )  
☒ RDCC Review (Y/N)  
(Date: \_\_\_\_\_ )  
☒ Fee Surf Agreement (Y/N)  
☒ Intent to Commingle (Y/N)

**LOCATION AND SITING:**

     R649-2-3.

Unit: \_\_\_\_\_

☒ R649-3-2. General

Siting: 460 From Qtr/Qtr & 920' Between Wells

     R649-3-3. Exception

     Drilling Unit

Board Cause No: \_\_\_\_\_

Eff Date: \_\_\_\_\_

Siting: \_\_\_\_\_

     R649-3-11. Directional Drill

COMMENTS: \_\_\_\_\_

STIPULATIONS: \_\_\_\_\_

*1- Federal Approval*  
*2- B. R. Ryan*



OPERATOR: THURSTON ENERGY (N2790)

SEC: 19,20 T. 9S R. 24E

FIELD: UNDESIGNATED (002)

COUNTY: UINTAH

SPACING: R649-3-2 / GENERAL SITING

**Field Status**  
 ABANDONED  
 ACTIVE  
 COMBINED  
 INACTIVE  
 PROPOSED  
 STORAGE  
 TERMINATED

**Unit Status**  
 EXPLORATORY  
 GAS STORAGE  
 NF PP OIL  
 NF SECONDARY  
 PENDING  
 PI OIL  
 PP GAS  
 PP GEOTHERML  
 PP OIL  
 SECONDARY  
 TERMINATED

**Wells Status**  
 GAS INJECTION  
 GAS STORAGE  
 LOCATION ABANDONED  
 NEW LOCATION  
 PLUGGED & ABANDONED  
 PRODUCING GAS  
 PRODUCING OIL  
 SHUT-IN GAS  
 SHUT-IN OIL  
 TEMP. ABANDONED  
 TEST WELL  
 WATER INJECTION  
 WATER SUPPLY  
 WATER DISPOSAL  
 DRILLING



PREPARED BY: DIANA WHITNEY  
 DATE: 8-FEBRUARY-2006



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

February 9, 2006

Thurston Energy Operating Company  
P O Box 240  
Vernal, UT 84078

Re: Thurston 8-20-9-24 Well, 2038' FNL, 751' FEL, SE NE, Sec. 20, T. 9 South,  
R. 24 East, Uintah County, Utah

Gentlemen:

Pursuant to the provisions and requirements of Utah Code Ann. § 40-6-1 *et seq.*, Utah Administrative Code R649-3-1 *et seq.*, and the attached Conditions of Approval, approval to drill the referenced well is granted.

This approval shall expire one year from the above date unless substantial and continuous operation is underway, or a request for extension is made prior to the expiration date. The API identification number assigned to this well is 43-047-37709.

Sincerely,

A handwritten signature in black ink, appearing to read "Gil Hunt".

Gil Hunt  
Associate Director

pab  
Enclosures

cc: Uintah County Assessor  
Bureau of Land Management, Vernal District Office

**Operator:** Thurston Energy Operating Company  
**Well Name & Number** Thurston 8-20-9-24  
**API Number:** 43-047-37709  
**Lease:** U-31266

**Location:** SE NE                      **Sec.** 20                      **T.** 9 South                      **R.** 24 East

### **Conditions of Approval**

**1. General**

Compliance with the requirements of Utah Admin. R. 649-1 *et seq.*, the Oil and Gas Conservation General Rules, and the applicable terms and provisions of the approved Application for permit to drill.

**2. Notification Requirements**

Notify the Division within 24 hours of spudding the well.

- Contact Carol Daniels at (801) 538-5284.

Notify the Division prior to commencing operations to plug and abandon the well.

- Contact Dan Jarvis at (801) 538-5338

**3. Reporting Requirements**

All required reports, forms and submittals will be promptly filed with the Division, including but not limited to the Entity Action Form (Form 6), Report of Water Encountered During Drilling (Form 7), Weekly Progress Reports for drilling and completion operations, and Sundry Notices and Reports on Wells requesting approval of change of plans or other operational actions.

**4. State approval of this well does not supersede the required federal approval, which must be obtained prior to drilling.**

**5. This proposed well is located in an area for which drilling units (well spacing patterns) have not been established through an order of the Board of Oil, Gas and Mining (the "Board"). In order to avoid the possibility of waste or injury to correlative rights, the operator is requested, once the well has been drilled, completed, and has produced, to analyze geological and engineering data generated therefrom, as well as any similar data from surrounding areas if available. As soon as is practicable after completion of its analysis, and if the analysis suggests an area larger than the quarter-quarter section upon which the well is located is being drained, the operator is requested to seek an appropriate order from the Board establishing drilling and spacing units in conformance with such analysis by filing a Request for Agency Action with the Board.**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENTFORM APPROVED  
Budget Bureau No. 1004-0135  
Expires: March 31, 1993

## SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reenter a different reservoir.

Use "APPLICATION FOR PERMIT -" for such proposals

5. Lease Designation and Serial No.  
UTU-312666. If Indian, Allottee or Tribe Name  
na7. If Unit or CA, Agreement Designation  
na8. Well Name and No.  
Thurston 8-20-9-249. API Well No.  
430473770910. Field and Pool, or Exploratory Area  
undesignated11. County or Parish, State  
Uintah Utah

## SUBMIT IN TRIPLICATE

## 1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

## 2. Name of Operator

Thurston Energy Operating Company

## 3. Address and Telephone No.

PO BOX 240 Vernal, UT 84078

## 4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

2038' FNL &amp; 751' FEL

9S 24E Sec 20

## 12. CHECK APPROPRIATE BOX(es) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

## TYPE OF SUBMISSION

☒ Notice of Intent  
☐ Subsequent Report  
☐ Final Abandonment Notice

## TYPE OF ACTION

☐ Abandonment  
☐ Recompletion  
☐ Plugging Back  
☐ Casing Repair  
☐ Altering Casing  
☐ Other \_\_\_\_\_  
☒ Change of Plans  
☐ New Construction  
☐ Non-Routine Fracturing  
☐ Water Shut-Off  
☐ Conversion to Injection  
☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

## 13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)\*

Thurston Energy Operating Company requests to change the water source for drilling, cementing and completion. The new water source would come from a Vernal City tap. A permit number was not provided for the new source. Please see the attached map for additional details. The address of the tap is Dalbo/A-1 Tank at 355 South 1000 East Vernal, UT 84078.

## 14. I hereby certify that the foregoing is true and correct

Signed

William C. Ayco

Title Agent

Date 07/19/06

(This space for Federal or State office use)

Approved by

Title

Date

Conditions of approval, if any:

Title 18 U.S.C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

\*See Instructions on Reverse Side

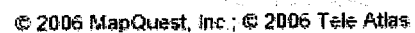
RECEIVED

JUL 28 2006

DIV. OF OIL, GAS &amp; MINING

## DIV. OF OIL, GAS & MINING

## DIV. OF OIL, GAS & MINING





**UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT**

**APPLICATION FOR PERMIT TO DRILL, DEEPEN, OR PLUG BACK**

1a. TYPE OF WORK

**DRILL****DEEPEN****PLUG BACK**

b. TYPE OF WELL

OIL



GAS



OTHER

SINGLE



ZONE

MULTIPLE ZONE



2. NAME OF OPERATOR

**Thurston Energy Operating Company**

3. ADDRESS OF OPERATORS

**PO Box 240 Vernal, UT 84078**

4. LOCATION OF WELL (Report location clearly and in accordance with any State requirement)

at surface **2038' FNL & 751' FEL SENE**At proposed prod. Zone **same as above**

14. DISTANCE IN MILES AND DIRECTION FROM NEAREST TOWN OR POST OFFICE\*

**43 miles south of Vernal, UT**

15. DISTANCE FROM PROPOSED LOC. TO NEAREST PROP. OR LEASE LINE, FT. (Also to nearest drlg. Unit line, if any)

**751'**

16. NO. OF ACRES IN LEASE

**1,594**

17. NO. OF ACRES ASSIGNED TO THIS WELL

**40**

16. DISTANCE FROM PROPOSED LOCATION \* TO NEAREST WELL, DRILLING COMPLETED.

OR APPLIED FOR, ON THIS LEASE, FT.

**2,500'**

19. PROPOSED DEPTH

**8,000**

20. ROTARY OR CABLE TOOLS

**Rotary**

21. ELEVATION (SHOW WHETHER DF, RT, GR, etc.)

**5288' GR**

9. WELL NO.

**Thurston 8-20-9-24**

10. FIELD OR LEASE NAME

**Undesignated**

11. Sec., T., R., M., OR BLK

AND SURVEY OR AREA

**Sec. 20, T9S, R24E**

12. COUNTY OR PARISH

**Uintah**

13. STATE

**Utah**

**PROPOSED CASING AND CEMENT PROGRAM**

SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	QUANTITY OF CEMENT
<b>11"</b>	<b>9 5/8"</b>	<b>36#</b>	<b>2000'</b>	<b>180 sks</b>
<b>7 7/8"</b>	<b>5 1/2"</b>	<b>17#</b>	<b>T.D.</b>	<b>808 sks</b>

**The operator requests permission to drill the subject well. Please find the attached 10 point plan and 13 point plan.**

**William A Ryan  
290 S 800 E  
Vernal, UT 84078  
435-789-0968**

**RECEIVED**

**DEC 21 2006**

DIV. OF OIL, GAS & MINING

IN ABOVE SPACE DESCRIBE PROPOSED PROGRAM: If proposed in to deepen or plug back, give data on proposed productive zone and proposed new productive zone. If proposal is to drill or deepen directional, give pertinent data on subsurface location and measure and true vertical depths. Give blowout preventer program, if any.

24

SIGNATURE

**William A. Ryan**

TITLE

**Agent**

DATE

(This space for Federal or State Office use)

PERMIT NO.

APPROVAL DATE

**Assistant Field Manager**

APPROVED BY

CONDITIONS OF APPROVAL IF ANY

TITLE

**Lands & Mineral Resources**

DATE

**11-30-2006**

**NOTICE OF APPROVAL**

**CONDITIONS OF APPROVAL ATTACHED**

\*See Instructions on Reverse Side

Title 18 U. S. C. Section 1001, makes it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**06BM2060A**



UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
VERNAL FIELD OFFICE

170 South 500 East

VERNAL, UT 84078

(435) 781-4400



**CONDITIONS OF APPROVAL FOR APPLICATION FOR PERMIT TO DRILL**

<b>Company:</b>	<b>Thurston Energy Operating Company</b>	<b>Location:</b>	<b>SENE, Sec. 20, T9S, R24E</b>
<b>Well No:</b>	<b>Thurston 8-20-9-24</b>	<b>Lease No:</b>	<b>UTU-31266</b>
<b>API No:</b>	<b>43-047-37709</b>	<b>Agreement:</b>	<b>N/A</b>

Petroleum Engineer:	Matt Baker	Office: 435-781-4490	Cell: 435-828-4470
Petroleum Engineer:	Michael Lee	Office: 435-781-4432	Cell: 435-828-7875
Supervisory Petroleum Technician:	Jamie Sparger	Office: 435-781-4502	Cell: 435-828-3913
Environmental Scientist:	Paul Buhler	Office: 435-781-4475	Cell: 435-828-4029
Environmental Scientist:	Karl Wright	Office: 435-781-4484	
Natural Resource Specialist:	Holly Villa	Office: 435-781-4404	
Natural Resource Specialist:	Melissa Hawk	Office: 435-781-4476	
Natural Resource Specialist:	Charles Sharp	Office: 435-781-4441	
Natural Resource Specialist:	Scott Ackerman	Office: 435-781-4437	
<b>After Hours Contact Number: 435-781-4513</b>		Fax: 435-781-4410	

**A COPY OF THESE CONDITIONS SHALL BE FURNISHED TO YOUR  
FIELD REPRESENTATIVE TO INSURE COMPLIANCE**

All lease and/or unit operations are to be conducted in such a manner that full compliance is made with the applicable laws, regulations (43 CFR Part 3160), and this approved Application for Permit to Drill including Surface and Downhole Conditions of Approval. The operator is considered fully responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and completion operations. **This permit is approved for a one-year period. An additional year extension may be applied for by sundry notice prior to expiration.**

**NOTIFICATION REQUIREMENTS**

- |   |  |
|---|--|
| Location Construction<br>(Notify Holly Villa)               | - Forty-Eight (48) hours prior to construction of location and access roads.   |
| Location Completion<br>(Notify Holly Villa)                 | - Prior to moving on the drilling rig.   |
| Spud Notice<br>(Notify Petroleum Engineer)                  | - Twenty-Four (24) hours prior to spudding the well.   |
| Casing String & Cementing<br>(Notify Jamie Sparger SPT)     | - Twenty-Four (24) hours prior to running casing and cementing all casing strings.   |
| BOP & Related Equipment Tests<br>(Notify Jamie Sparger SPT) | - Twenty-Four (24) hours prior to initiating pressure tests.   |
| First Production Notice<br>(Notify Petroleum Engineer)      | - Within Five (5) business days after new well begins or production resumes after well has been off production for more than ninety (90) days. |

**SURFACE USE PROGRAM  
CONDITIONS OF APPROVAL (COAs)**

- If paleontologic materials are uncovered during construction, the operator shall immediately stop work that might further disturb such materials and contact the Authorized Officer (AO). A determination will be made by the AO as to what mitigation will be necessary for the discovered paleontologic material.
- The interim seed mix for this location shall be:

Crested wheatgrass	<i>Agropyron cristatum</i>	6 lbs. /acre
Needle and Threadgrass	<i>Stipa comata</i>	6 lbs. /acre

  - All pounds are in pure live seed.
  - Reseeding may be required if first seeding is not successful.
- The topsoil from the reserve pit shall be stripped and piled separately near the reserve pit. When the reserve pit is closed, it shall be recontoured and the topsoil respread, and the area shall be seeded in the same manner as the location topsoil.
- Once the location is plugged and abandoned, it shall be recontoured to natural contours, topsoil respread where appropriate, and the entire location seeded with the recommended seed mix. Seeding shall take place by broadcasting the seed and walking it into the soil with a dozer immediately after the dirt work is completed.

•

- **DOWNHOLE CONDITIONS OF APPROVAL**

All provisions outlined in Onshore Oil & Gas Order #2 Drilling Operations shall be strictly adhered to. The following items are emphasized:

**SITE SPECIFIC DOWNHOLE CONDITIONS OF APPROVAL**

- A Cement Bond Log (CBL) shall be run from the TD to the top of cement. A field copy of the CBL shall be submitted to the BLM Vernal Field Office for review.

**DRILLING/COMPLETION/PRODUCING OPERATING STANDARDS**

- There shall be no deviation from the proposed drilling, completion, and/or workover program as approved. Safe drilling and operating practices must be observed. All wells, whether drilling, producing, suspended, or abandoned, shall be identified in accordance with 43 CFR 3162.6. There shall be a sign or marker with the name of the operator, lease serial number, well number, and surveyed description of the well. Any changes in operation must have prior approval from the BLM, Vernal Field Office Petroleum Engineers.
- The spud date and time shall be reported orally to Vernal Field Office within 24 hours of spudding.
- **Notify Vernal Field Office Supervisory Petroleum Engineering Technician at least 24 hours in advance of casing cementing operations and BOPE & casing pressure tests.**
- Blowout prevention equipment (BOPE) shall remain in use until the well is completed or abandoned. Closing unit controls shall remain unobstructed and readily accessible at all times. Choke manifolds shall be located outside of the rig substructure.
- All BOPE components shall be inspected daily and those inspections shall be recorded in the daily drilling report. Components shall be operated and tested as required by Onshore Oil & Gas Order No. 2 to insure good mechanical working order. All BOPE pressure tests shall be performed by a test pump with a chart recorder and **NOT** by the rig pumps. Test shall be reported in the driller's log.
- BOP drills shall be initially conducted by each drilling crew within 24 hours of drilling out from under the surface casing and weekly thereafter as specified in Onshore Oil & Gas Order No. 2.
- Casing pressure tests are required before drilling out from under all casing strings set and cemented in place.
- No aggressive/fresh hard-banded drill pipe shall be used within casing.
- The lessee/operator must report all shows of water or water-bearing sands to the BLM. If flowing water is encountered it must be sampled and analyzed (a copy of the analyses to be submitted to the BLM Field Office in Vernal, Utah).
- All oil and gas shows shall be adequately tested for commercial possibilities, reported, and protected.

- The lessee/operator must report encounters of all non oil & gas mineral resources (such as Gilsonite, tar sands, oil shale, etc.) to Peter Sokolosky or another geologist of the Vernal Field Office, in writing, within 5 working days of each encounter. Each report shall include the well name/number, well location, date and depth (from KB or GL) of encounter, vertical footage of the encounter and, the name of the person making the report (along with a telephone number) shall the BLM need to obtain additional information.
- No location shall be constructed or moved, no well shall be plugged, and no drilling or workover equipment shall be removed from a well to be placed in a suspended status without prior approval of the BLM, Vernal Field Office. If operations are to be suspended for more than 30 days, prior approval of the BLM, Vernal Field Office shall be obtained and notification given before resumption of operations.
- Chronologic drilling progress reports shall be filed directly with the BLM, Vernal Field Office on a weekly basis in sundry, letter format or e-mail to the Petroleum Engineers until the well is completed.
- Any change in the program shall be approved by the BLM, Vernal Field Office. "Sundry Notices and Reports on Wells" (Form BLM 3160-5) shall be filed for all changes of plans and other operations in accordance with 43 CFR 3162.3-2.
- Emergency approval may be obtained orally, but such approval does not waive the written report requirement. Any additional construction, reconstruction, or alterations of facilities, including roads, gathering lines, batteries, etc., which will result in the disturbance of new ground, shall require the filing of a suitable plan pursuant to Onshore Oil & Gas Order No. 1 of 43 CFR 3164.1 and prior approval by the BLM, Vernal Field Office.
- In accordance with 43 CFR 3162.4-3, this well shall be reported on the "Monthly Report of Operations" (Oil and Gas Operations Report ((OGOR)) starting with the month in which operations commence and continue each month until the well is physically plugged and abandoned. This report shall be filed in duplicate, directly with the Minerals Management Service, P.O. Box 17110, Denver, Colorado 80217-0110, or call 1-800-525-7922 (303) 231-3650 for reporting information.
- Whether the well is completed as a dry hole or as a producer, "Well Completion and Recompletion Report and Log" (BLM Form 3160-4) shall be submitted not later than 30 days after completion of the well or after completion of operations being performed, in accordance with 43 CFR 3162.4-1. Two copies of all logs run, core descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed on BLM Form 3160-4. Submit with the well completion report a geologic report including, at a minimum, formation tops, and a summary and conclusions. Also include deviation surveys, sample descriptions, strip logs, core data, drill stem test data, and results of production tests if performed. Samples (cuttings, fluid, and/or gas) shall be submitted only when requested by the BLM, Vernal Field Office.
- A cement bond log (CBL) will be run from the production casing shoe to the surface casing shoe and shall be utilized to determine the bond quality for the production casing. Submit a field copy of the CBL to this office.
- Please submit an electronic copy of all other logs run on this well in LAS format to UT\_VN\_Welllogs@BLM.gov. This submission will supersede the requirement for submittal of

paper logs to the BLM.

- All off-lease storage, off-lease measurement, or commingling on-lease or off-lease shall have prior written approval from the BLM, Vernal Field Office.
- All measurement points shall be identified as point of sales or allocation for royalty determination prior to the installation of facilities.
- Oil and gas meters shall be calibrated in place prior to any deliveries. The Field Office Petroleum Engineers will be provided with a date and time for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration reports shall be submitted to the BLM, Vernal Field Office. All measurement facilities will conform to the API standards for liquid hydrocarbons and the AGA standards for natural gas measurement.
- A schematic facilities diagram as required by Onshore Oil & Gas Order No. 3 shall be submitted to the BLM, Vernal Field Office within 30 days of installation or first production, whichever occurs first. All site security regulations as specified in Onshore Oil & Gas Order No. 3 shall be adhered to. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with Onshore Oil & Gas Order No. 3.
- This APD is approved subject to the requirement that, shall the well be successfully completed for production, the BLM, Vernal Field office must be notified when it is placed in a producing status. Such notification will be by written communication and must be received in this office by not later than the fifth business day following the date on which the well is placed on production. The notification shall provide, as a minimum, the following informational items:
  - Operator name, address, and telephone number.
  - Well name and number.
  - Well location (¼¼, Sec., Twn, Rng, and P.M.).
  - Date well was placed in a producing status (date of first production for which royalty will be paid).
  - The nature of the well's production, (i.e., crude oil, or crude oil and casing head gas, or natural gas and entrained liquid hydrocarbons).
  - The Federal or Indian lease prefix and number on which the well is located; otherwise the non-Federal or non-Indian land category, i.e., State or private.
  - Unit agreement and / or participating area name and number, if applicable.
  - Communitization agreement number, if applicable.
- Any venting or flaring of gas shall be done in accordance with Notice to Lessees (NTL) 4A and needs prior approval from Field Office Petroleum Engineers.
- All undesirable events (fires, accidents, blowouts, spills, discharges) as specified in NTL 3A will be reported to the BLM, Vernal Field Office. Major events as defined in NTL3A, shall be reported verbally within 24 hours, followed by a written report within 15 days. "Other than Major

Events" will be reported in writing within 15 days. "Minor Events" will be reported on the Monthly Report of Operations and Production.

- Pursuant to Onshore Oil & Gas Order No. 7, this is authorization for pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by this office and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method shall be submitted along with any necessary water analyses, as soon as possible, but no later than 45 days after the date of first production. Any method of disposal which has not been approved prior to the end of the authorized 90-day period will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by this office.
- Unless the plugging is to take place immediately upon receipt of oral approval, the Field Office Petroleum Engineers must be notified at least 24 hours in advance of the plugging of the well, in order that a representative may witness plugging operations. If a well is suspended or abandoned, all pits must be fenced immediately until they are backfilled. The "Subsequent Report of Abandonment" (Form BLM 3160-5) must be submitted within 30 days after the actual plugging of the well bore, showing location of plugs, amount of cement in each, and amount of casing left in hole, and the current status of the surface restoration.



**State of Utah**

**Department of  
Natural Resources**

MICHAEL R. STYLER  
*Executive Director*

**Division of  
Oil, Gas & Mining**

JOHN R. BAZA  
*Division Director*

JON M. HUNTSMAN, JR.  
*Governor*

GARY R. HERBERT  
*Lieutenant Governor*

March 13, 2007

Thurston Energy Operating Company  
P.O. Box 240  
Vernal, UT 84078

Re: APD Rescinded –Thurston 8-20-9-24 Sec. 20 T. 9 R. 24E  
Uintah County, Utah API No. 43-047-37709


Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on February 9, 2006. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective March 13, 2007.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

  
Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
**Do not use this form for proposals to drill or to re-enter an  
abandoned well. Use Form 3160-3 (APD) for such proposals.**

5. Lease Serial No.  
UTU-31266

6. If Indian, Allottee or Tribe Name  
NA

**SUBMIT IN TRIPLICATE – Other instructions on page 2.**

7. If Unit of CA/Agreement, Name and/or No.  
NA

8. Well Name and No.  
Thurston 8-20-9-24

9. API Well No.  
4304737709

Type of Well  
☐ Oil Well ☒ Gas Well ☐ Other

Name of Operator  
Thurston Energy Operating Company

a. Address  
90 South 800 East  
Cernal, Utah 84078

3b. Phone No. (include area code)  
(435)789-0968

10. Field and Pool or Exploratory Area  
Undesignated

c. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
038° FNL & 751° FEL SENE Sec. 20 T9S, R24E

11. Country or Parish, State  
Utah, Utah

**12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA**

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

3. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

The operator respectfully requests a one year extension for the subject location.

RECEIVED  
VERNAL FIELD OFFICE  
2007 NOV -6 AM 8:53  
BUREAU OF LAND MGMT.

RECEIVED

NOV 20 2007

DIV. OF OIL, GAS & MINING

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)  
Ginger Stringham

Title Agent

Signature

Date

11/5/07

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

Petroleum Engineer

NOV 07 2007

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**CONDITIONS OF APPROVAL ATTACHED**

UDOGM

# **CONDITIONS OF APPROVAL**

## **Thurston Energy Operating Company**

### **Notice of Intent APD Extension**

**Lease:** UTU-31266  
**Well:** Thurston 8-20-9-24  
**Location:** SENE Sec 20 T9S R24E

An extension for the referenced APD is granted with the following conditions:

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1. The extension and APD shall expire on 12/1/2008.

If you have any other questions concerning this matter, please contact Jim Ashley of this office at (435) 781-4470.

STATE OF UTAH  
DEPARTMENT OF NATURAL RESOURCES  
DIVISION OF OIL, GAS AND MINING

FORM 9

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill new wells, significantly deepen existing wells below current bottom-hole depth, reenter plugged wells, or to drill horizontal laterals. Use APPLICATION FOR PERMIT TO DRILL form for such proposals.

1. TYPE OF WELL OIL WELL <input type="checkbox"/> GAS WELL <input checked="" type="checkbox"/> OTHER _____		5. LEASE DESIGNATION AND SERIAL NUMBER: U-31266
2. NAME OF OPERATOR: Thurston Energy Operating Company		6. IF INDIAN, ALLOTTEE OR TRIBE NAME:
3. ADDRESS OF OPERATOR: 290 South 800 East CITY Vernal STATE UT ZIP 84078		7. UNIT or CA AGREEMENT NAME:
4. LOCATION OF WELL FOOTAGES AT SURFACE: 2038' FNL & 751' FEL		8. WELL NAME and NUMBER: Thurston 8-20-9-24
QTR/QTR, SECTION, TOWNSHIP, RANGE, MERIDIAN: SENE 20 9S 24E		9. API NUMBER: 4304737709
COUNTY: Uintah		10. FIELD AND POOL, OR WILDCAT: Bonanza
STATE: UTAH		

11. CHECK APPROPRIATE BOXES TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION		
<input checked="" type="checkbox"/> NOTICE OF INTENT (Submit in Duplicate) Approximate date work will start: _____	<input type="checkbox"/> ACIDIZE	<input type="checkbox"/> DEEPEN	<input type="checkbox"/> REPERFORATE CURRENT FORMATION
	<input type="checkbox"/> ALTER CASING	<input type="checkbox"/> FRACTURE TREAT	<input type="checkbox"/> SIDETRACK TO REPAIR WELL
	<input type="checkbox"/> CASING REPAIR	<input type="checkbox"/> NEW CONSTRUCTION	<input type="checkbox"/> TEMPORARILY ABANDON
	<input type="checkbox"/> CHANGE TO PREVIOUS PLANS	<input type="checkbox"/> OPERATOR CHANGE	<input type="checkbox"/> TUBING REPAIR
	<input type="checkbox"/> CHANGE TUBING	<input type="checkbox"/> PLUG AND ABANDON	<input type="checkbox"/> VENT OR FLARE
<input type="checkbox"/> SUBSEQUENT REPORT (Submit Original Form Only) Date of work completion: _____	<input type="checkbox"/> CHANGE WELL NAME	<input type="checkbox"/> PLUG BACK	<input type="checkbox"/> WATER DISPOSAL
	<input type="checkbox"/> CHANGE WELL STATUS	<input type="checkbox"/> PRODUCTION (START/RESUME)	<input type="checkbox"/> WATER SHUT-OFF
	<input type="checkbox"/> COMMINGLE PRODUCING FORMATIONS	<input type="checkbox"/> RECLAMATION OF WELL SITE	<input checked="" type="checkbox"/> OTHER: <u>Extension</u>
	<input type="checkbox"/> CONVERT WELL TYPE	<input type="checkbox"/> RECOMPLETE - DIFFERENT FORMATION	

12. DESCRIBE PROPOSED OR COMPLETED OPERATIONS. Clearly show all pertinent details including dates, depths, volumes, etc.

The operator respectfully requests a one year APD approval extension for the subject location.

Approved by the  
Utah Division of  
Oil, Gas and Mining

Date: 04-29-08  
By: [Signature]

COPY SENT TO OPERATOR

Date: 5.1.2008  
Initials: KS

NAME (PLEASE PRINT) Ginger Bowden TITLE Agent  
SIGNATURE [Signature] DATE 4/24/2008

(This space for State use only)

RECEIVED

APR 28 2008

DIV. OF OIL, GAS & MINING

RESET

**Application for Permit to Drill  
Request for Permit Extension  
Validation**

(this form should accompany the Sundry Notice requesting permit extension)

**API:** 4304737709  
**Well Name:** Thurston 8-20-9-24  
**Location:** Sec. 20, T9S, R24E SENE  
**Company Permit Issued to:** Thurston Energy Operating Company  
**Date Original Permit Issued:** 2/9/2006

The undersigned as owner with legal rights to drill on the property as permitted above, hereby verifies that the information as submitted in the previously approved application to drill, remains valid and does not require revision.

Following is a checklist of some items related to the application, which should be verified.

If located on private land, has the ownership changed, if so, has the surface agreement been updated? Yes ☐ No ☒

Have any wells been drilled in the vicinity of the proposed well which would affect the spacing or siting requirements for this location? Yes ☐ No ☒

Has there been any unit or other agreements put in place that could affect the permitting or operation of this proposed well? Yes ☐ No ☒

Have there been any changes to the access route including ownership, or right-of-way, which could affect the proposed location? Yes ☐ No ☒

Has the approved source of water for drilling changed? Yes ☐ No ☒

Have there been any physical changes to the surface location or access route which will require a change in plans from what was discussed at the onsite evaluation? Yes ☐ No ☒

Is bonding still in place, which covers this proposed well? Yes ☒ No ☐

*Syngler Bowden*  
Signature

4/24/2008  
Date

Title: Agent

Representing: Thurston Energy Operating CO

**RECEIVED**  
**APR 28 2008**  
DIV. OF OIL, GAS & MINING



# United States Department of the Interior

## BUREAU OF LAND MANAGEMENT

Green River District-Vernal Field Office

170 South 500 East

Vernal, UT 84078

(435) 781-4400 Fax: (435) 781-4410

<http://www.blm.gov/ut/st/en/fo/vernal/html>



IN REPLY REFER TO:

3160

LLUTG01100

January 20, 2009

William A. Ryan, Agent  
Thurston Energy Operating Company  
290 South 800 East  
Vernal, UT 84078

43-047.37709

Re: Notice of Expiration  
Well No. Thurston 8-20-9-24  
SENE, Sec. 20, T9S, R24E  
Uintah County, Utah  
Lease No. UTU-31266

Dear Mr. Ryan:

The Application for Permit to Drill (APD) the above-referenced well was approved on November 30, 2006. A one (1) year extension of the original APD was requested on November 5, 2007. The request was reviewed and the extension approved until December 1, 2008. According to our records, no known activity has transpired at the approved location. In view of the foregoing, this office is notifying you that the approval of the referenced application has expired. If you intend to drill at this location in the future, a new Application for Permit to Drill must be submitted.

This office requires a letter confirming that no surface disturbance has been made for this drill site. Any surface disturbance associated with the approved location of this well is to be rehabilitated. A schedule for this rehabilitation must be submitted to this office. Your cooperation in this matter is appreciated.

If you have any questions regarding this matter, please contact me at (435) 781-4455.

Sincerely,

*Cindy Severson*

Cindy Severson  
Land Law Examiner

cc: UDOGM

**RECEIVED**

**FEB 02 2009**

**DIV. OF OIL, GAS & MINING**



JON M. HUNTSMAN, JR.  
Governor

GARY R. HERBERT  
Lieutenant Governor

# State of Utah

## DEPARTMENT OF NATURAL RESOURCES

MICHAEL R. STYLER  
Executive Director

### Division of Oil, Gas and Mining

JOHN R. BAZA  
Division Director

June 3, 2009

Thurston Energy Operating Co.  
290 South 800 East  
Vernal, UT 84078

Re: APD Rescinded – Thurston 8-20-9-24, Sec.20, T.9S, R.24E  
Uintah County, Utah API No. 43-047-37709

Ladies and Gentlemen:

The Application for Permit to Drill (APD) for the subject well was approved by the Division of Oil, Gas and Mining (Division) on May 3, 2007. On April 29, 2008, the Division granted a one-year APD extension. No drilling activity at this location has been reported to the division. Therefore, approval to drill the well is hereby rescinded, effective June 3, 2009.

A new APD must be filed with this office for approval prior to the commencement of any future work on the subject location.

If any previously unreported operations have been performed on this well location, it is imperative that you notify the Division immediately.

Sincerely,

Diana Mason  
Environmental Scientist

cc: Well File  
Bureau of Land Management, Vernal

